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Making Sense of Environmental Management in Welsh Universities

Christine Diane Chappell

Submitted to Swansea University in fulfilment of the requirements for
the Degree of Doctor of Philosophy

Swansea University

March 2011

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Abstract

This thesis examines the implementation and practice of environmental initiatives within universities. Environmental management is explored through the lens of individual sensemaking to further the understanding of managing change processes and to reveal the implications for university leadership.

This qualitative research is based around an interpretive study of four case study universities in South Wales, UK. The thesis introduces the concept of environmental management and highlights the drivers for implementing environmental management initiatives within higher education. This thesis provides a unique contribution to the existing debate on individual sensemaking through exploring the experiences of university members pertaining to the implementation of environmental management initiatives within the four universities.

Data analysis reveals internal barriers and the dysfunctional attitudes of organisational cynicism and ambivalence to change. As such, these concepts act as subtle resistors to implementing environmental management initiatives. The internal barriers manifest as a lack of environmental leadership and a failure to provide an environmental vision and strategy to university members. Associated organisational cynicism is seen to arise from the frustration and disillusionment of individuals towards the efforts of university leadership to implement environmental management. This thesis reveals that ambivalence is a common experience which results in a simultaneous supportive and negative response towards environmental management. Ambivalent behaviour is exposed by individual members and, importantly, by university leadership.

The thesis concludes that the ambivalence of university leadership is described as a 'latent' resistance to environmental management; a hidden internal obstacle which needs to be overcome in order to implement environmental management initiatives. In terms of university management, this research suggests the need for university leaders to acknowledge and understand the negative effects of organisational cynicism and ambivalence on managing change processes and on the university as a whole.

DECLARATION

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Table of Contents

Abstract	i
Declarations and Statements	ii
Table of Contents	iii
Acknowledgements	ix
List of Tables	x
List of Figures	xi
Chapter 1: Introduction to the Thesis	1
1.1 Introduction	1
1.2 Theoretical Concepts	2
1.3 Synopsis of the Thesis	6
1.4 Overview of Environmental Management in Universities	8
1.5 University Characteristics	9
1.6 New Managerialism	11
1.7 Background to Environmental Management	13
1.8 Drivers for Environmental Management within Higher Education	14
1.8.1 International Declarations	15
1.8.2 UK Government Reviews	15
1.9 Welsh Assembly Government Strategies	18
1.9.1 One Wales: One Planet	18
1.9.2 The Welsh Waste Strategy	19
1.9.3 Climate Change Strategy	19
1.9.4 Welsh Higher Education Initiatives	19
1.9.5 Education for Sustainable Development and Global Citizenship	21
1.10 Summary	23
Chapter 2: Introducing Environmental Management	24
2.1 Introduction	24
2.2 Facilitating Organisations for Environmental Management	24

2.2.1	The Higher Education Funding Council for Wales	24
2.2.2	The Carbon Trust	27
2.2.3	The Environmental Association for Universities and Colleges	28
2.2.4	People and Planet Organisation	29
2.2.5	Higher Education Environmental Performance Improvement	31
2.2.6	The South West Wales Higher Education Partnership	32
2.3	Overview of UK Environmental Legislation	33
2.3.1	Air Legislation	33
2.3.2	Waste Legislation	34
2.3.3	Energy Legislation	36
2.3.4	Water Legislation	37
2.4	Environmental Policy, Management Systems and Standards	38
2.4.1	First Steps: The Environmental Policy	38
2.4.2	The Basic Management System	38
2.4.3	Defining the Environmental Management System	39
2.4.4	Commitment to Environmental Management	40
2.4.5	Continuous Cycle of Improvement	40
2.4.6	Factors Influencing Environmental Management System Certification	42
2.5	International Recognition for Environmental Management Systems	44
2.5.1	International Organisation for Standardisation: ISO 14000	44
2.5.2	European Union Eco-Management and Audit Scheme	45
2.6	UK Recognition for Environmental Management Systems	47
2.6.1	Green Dragon Environmental Standard	47
2.6.2	British Standards Institute: BS8555	48
2.6.3	The Institute of Environmental Management and Assessment Acorn Scheme	48
2.7	Summary	49

Chapter 3: Literature Review	51
3.1 Introduction	51
3.2 Drivers, Strategy and the role of Leadership	53
3.2.1 Drivers for Environmental Management	53
3.2.2 Strategy and Change Management	54
3.2.3 Environmental Leadership and Management	57
3.3 Barriers and Obstacles to Environmental Management	60
3.4 The Role of Communication during Organisational Change	61
3.5 The role of power and identity within organisations	65
3.6 Power, Knowledge and Resistance: Complex Relations	67
3.7 Organisational Cynicism and Ambivalence to Change Processes	70
3.8 The Phenomenon of Individual Sensemaking	72
3.9 Summary	79
Chapter 4: Research Methodology ~ An Interpretive Reading	81
4.1 Introduction	81
4.2 The Research Approach	82
4.3 Case Study Strategy	85
4.4 Qualitative Interviewing	86
4.4.1 Gaining Access to the Interviewees	88
4.5 Data Sources and Methods of Data Collection	89
4.5.1 Documentation and Official Data	91
4.6 Data Generation through Semi-structured Interviews	92
4.6.1 Sensemaking in the Interviews	95
4.7 Visual Data	98
4.7.1 Data Generation through Drawings	100
4.8 Analysis of the Data	102
4.9 Summary	106

Chapter 5: The Four University Case Studies	108
5.1 Introduction	108
5.2 Cross-Case Analysis	110
5.2.1 Environmental Management System (EMS)	111
5.2.2 Internal Drivers	112
5.2.3 External Drivers	113
5.2.4 Outcomes of the Cross-Case Analysis	113
5.3 Case I: Cardiff University	116
5.3.1 Background to the University	116
5.3.2 Environmental Management	117
5.3.2.1 Environmental Management Initiatives	118
5.3.2.2 Eco Champions Network	118
5.3.2.3 Environmental Policy	119
5.3.3 Environmental Management System Implementation at Cardiff	121
5.4 Case II: Swansea University	129
5.4.1 Background to the University	129
5.4.2 Environmental Management at Swansea	130
5.4.2.1 Environmental Policy	131
5.4.2.2 Environmental Management Initiatives	131
5.4.3 Environmental Management Practice at Swansea University	132
5.5 Case III: Glamorgan University	139
5.5.1 Background to the University	139
5.5.2 The Environmental Management System	140
5.5.2.1 Environmental Policy	142
5.5.3 Environmental Management System in Practice	143
5.6 Case IV: Swansea Metropolitan University	151
5.6.1 Background to the University	151
5.6.2 Environmental Management Initiatives	151
5.6.2.1 Environmental Policy	153
5.6.3 Environmental Management in Practice	153
5.7 Summary	160

Chapter 6: Making sense of Environmental Management within Pre-1992 Universities	162
6.1 Introduction	162
6.2 Cardiff University	167
6.2.1 Roger ~ ‘Stuck in the middle’	167
6.2.2 Susan ~ ‘The active traveller’	173
6.2.3 Helen ~ ‘A disillusioned employee’	178
6.2.4 Darren ~ ‘Old fogies and ivory towers’	181
6.2.5 Cardiff University Summary	186
6.3 Swansea University	189
6.3.1 Tom ~ ‘Environmental research is good for publicity’	189
6.3.2 Lorna ~ ‘Window dressing and ticking boxes’	194
6.3.3 Eric ~ ‘Where’s the strategy?’	198
6.3.4 Stewart ~ ‘Needs someone with initiative’	203
6.3.5 Swansea University Summary	208
6.4 Chapter Summary	210
 Chapter 7: Making Sense of Environmental Management within Post-1992 Universities	 215
7.1 Introduction	215
7.2 Glamorgan University	216
7.2.1 Terry ~ ‘The enthusiastic amateur’	217
7.2.2 Vicky ~ ‘We still have quite a long way to go’	223
7.2.3 Margaret ~ ‘The reluctant convert to online voting’	227
7.2.4 Kevin ~ ‘Flexitime frustrations’	230
7.2.5 Glamorgan University Summary	235
7.3 Swansea Metropolitan University	238
7.3.1 Rachael ~ ‘An Environmental Champion’	238
7.3.2 Mathew ~ ‘Energy consumer’	242
7.3.3 Karen ~ ‘The frustrated recycler’	247
7.3.4 Ben ~ ‘Sees no genuine motivation to act’	252
7.3.5 Swansea Metropolitan University Summary	256
7.4 Chapter Summary	259

Chapter 8: Discussion and Conclusion	263
8.1 Introduction	263
8.2 Consideration of Implications for Practice	265
8.3 Environmental Leadership within Universities ~ A General View	268
8.4 Conclusion	270
8.4.1 Implications for Implementing Environmental Management in Universities	271
8.4.2 The Negative Effects of Organisational Cynicism on Managing Change within Universities	274
8.4.3 Individual Ambivalence to Environmental Management	276
8.4.4 Leadership Ambivalence to Environmental Management	277
8.5 Reflections	278
 Appendix A: Interview Questions	 282
References	285

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List of Tables

Table 2.1	31
Extract of Results: People and Planet Rankings, 2007 to 2010	
Table 2.2	50
Summary of Facilitating Organisations and Standards	
Table 3.1	78
Extract from ‘Characteristics of ambiguous, changing situations’	
Table 4.1	90
Qualitative Data Sources, Data and Methods	
Table 4.2	93
Sample of interviews completed	
Table 5.1	114
Outcomes of Cross-Case Analysis	

List of Figures

Figure 2.1 Plan-Do-Check-Act Cycle	42
Figure 6.1 Roger ~ ‘Stuck in the middle’, Cardiff University	171
Figure 6.2 Susan ~ ‘The active traveller’, Cardiff University	177
Figure 6.3 Darren ~ ‘Old fogies and ivory towers’, Cardiff University	185
Figure 6.4 Tom ~ ‘Environmental research is good for publicity, Swansea University	193
Figure 6.5 Lorna ~ ‘Window dressing and ticking boxes’, Swansea University	197
Figure 6.6 Eric ~ ‘Where’s the strategy?’, Swansea University	202
Figure 6.7 Stewart ~ ‘Needs someone with initiative’, Swansea University	206
Figure 7.1 Terry ~ ‘The enthusiastic amateur’, Glamorgan University	221
Figure 7.2 Kevin ~ ‘Flexitime frustrations’, Glamorgan University	234
Figure 7.3 Rachael ~ ‘An Environmental Champion’, Swansea Metropolitan University	241
Figure 7.4 Mathew ~ ‘Energy consumer’, Swansea Metropolitan University	246
Figure 7.5 Karen ~ ‘The frustrated recycler’, Swansea Metropolitan University	251
Figure 7.6 Ben ~ ‘Sees no genuine motivation to act’, Swansea Metropolitan University	255

Chapter 1: Introduction to the Thesis

1.1 Introduction

The aims of this thesis are to explore the implementation and practice of environmental management within universities in South Wales through the sensemaking of individual members. The field of environmental management is explored through the theoretical discipline of individual sensemaking, providing a unique contribution to this area of research. By focusing on sensemaking this thesis brings a different perspective for assessing environmental practice, contributing to the scant research on individual sensemaking of change within universities. As such, this research provides a unique contribution to the existing debate on sensemaking through the exploration of the experiences of university members of environmental management implementation.

This thesis provides a unique focus on environmental management within the Higher Education sector in comparison to contemporary research in Corporate Social Responsibility within banking and manufacturing. As such, this research highlights the ability of universities in South Wales to promote environmental thinking and ways of working in line with the drivers applied to the Higher Education sector through UK legislation and Welsh Assembly Government strategies. In addition, this research provides a unique contribution to individual sensemaking through the exploration of the implementation of environmental management change events within universities.

This research highlights the problems encountered within these case study universities regarding change management implementation and practice. With

regards to the issue of how to engage individuals with environmental management initiatives, this research finds a need for the emphasis of environmental management as a change initiative. This situation arises from the case study universities not having a clear environmental vision and strategy, leading to a lack of engagement by individuals. In turn, this research finds that the dearth of effective communication of environmental management initiatives leads to a lack of awareness by individuals.

Through individual sensemaking the negative effects of organisational cynicism and ambivalence during change events is highlighted. Individuals reveal frustration and disillusionment with the slow pace of environmental management implementation and practice, leading to some members becoming unmotivated with regards to change events. In this research, organisational cynicism is found to arise from the need for individuals to be engaged with the change process to ensure awareness and active participation. In addition, individual sensemaking points to the ambivalence of both individuals and university leadership towards environmental management. This thesis contributes to the literature on the concepts of organisational cynicism and ambivalence during change implementation within universities.

This thesis is motivated by the importance to the researcher of environmental management initiatives to reduce natural resource use and the reduction in carbon pollution in line with UK Government targets.

1.2 Theoretical Concepts

This thesis explores the change management processes to implement environmental management within universities through the lens of individual sensemaking. To

provide an introduction, the theoretical concepts of change management, sensemaking, organisational cynicism and ambivalence are summarised in this section.

It is claimed that over 60% of change efforts fail (Burnes, 2004; Higgs and Rowland, 2005) leading to the debate of how to effect change within organisations. The importance of effective change implementation is highlighted by Real and Poole (2005, cited in Lewis, 2007) in that potentially brilliant innovation will remain as 'potential' without effective implementation, whilst Diefenbach (2007) proposes that change events are about not only changing processes, structures and routines but importantly they are about changing how people think and act. This aspect brings to the fore the importance of creating awareness of initiatives and engaging members with the change process. With regards to implementing environmental management, Christensen *et al.* (2009) highlight the need to adopt formal environmental procedures to create sustainable university practices, whilst Spellerberg *et al.* (2005) warn against *ad hoc* environmental management as being an 'inadequate' (p. 125) approach. Kotter (1995) proposes that in order to create a transformation there is a need for leadership to create a vision and to develop strategies to achieve this. Importantly, Klarner *et al.* (2008) state that the vision and strategy for change should be effectively communicated throughout the organisation to create awareness and engagement. In this research, the importance of creating effective conditions for change is highlighted through creating awareness and engagement of environmental management initiatives by university members.

One feature of change events is to alter existing values and meanings for organisational members, giving rise to the need for members to make sense of the change process for themselves (Gioia and Chittipeddi, 1991). Individual sensemaking is said to involve the "...ongoing retrospective development of plausible images" (Weick *et al.*, 2005:409) where actors seek to make sense of events in their individual ways (Rhodes and Brown, 2005). As a result, much sense within organisations is not shared given that individuals ascribe their own meaning to events. Through this retrospective social process, organisational members develop new meaning and interpretations (Balogun and Johnson, 2004). According to Weick (1995) sensemaking takes place when normal routines no longer exist and individuals need to create new meaning to explain their changed reality. Individuals are said to initiate sensemaking when they are confronted with so-called 'shocks'; implausible events which they need to make sense of for themselves so as to create understanding (Angus-Leppan *et al.*, 2010b). In this thesis, the implementation and practice of environmental management is explored through the lens of individual sensemaking. Individual members were invited to make sense of their environmental management experiences through the interview process, being asked to retrospectively make sense of the on-going implementation and practice of environmental management initiatives.

In this research the constructs of organisational cynicism and ambivalence arise from the analysis of the data. Organisational cynicism is described variously as "...a pessimistic viewpoint about change efforts" (Wanous *et al.*, 2000:133) and also as "...an evaluative judgement that stems from an individual's employment experiences" (Cole *et al.*, 2006:463). Change processes are said to bring about

increased levels of organisational cynicism, causing feelings of frustration and disillusion by members (Brown and Cregan, 2008). As such, organisational cynicism can have negative effects on organisations as members become unmotivated; not only towards change, but towards the organisation as a whole. Important to this research is that Bedeian (2007) and Yuxia and Daniels (2008) argue that organisational cynicism towards change events is evident within higher education institutions. The complexities of responses to change events are furthered by the variances of individual evaluations through ambivalence. An ambivalent response to change is said to involve a simultaneous supportive and negative view (Plambeck and Weber, 2010) or alternatively where an individual's cognitive response is in contrast to an emotional response (Piderit, 2000). Plambeck and Weber (2010) point to the negative effects of ambivalence on the outcomes of change processes, as ambivalence can manifest as resistance (Piderit, 2000). Despite the prevalence of ambivalence within individual responses to change (Piderit, 2000), it is proposed that ambivalence can be minimised through increasing engagement for individuals with the change event (Moon, 2009). Relevant to this research is the proposal that the central role of leadership is to facilitate change through effective communication of the change vision to create awareness and engagement for organisational members (Frahm and Brown, 2005; Daly *et al.*, 2003; Elving, 2005).

The empirical findings of this research suggest that environmental management is *not* being implemented within these case study universities despite UK legislation and Welsh Assembly Government strategies in line with UK Government targets aimed to reduce carbon emissions. This research finds organisational cynicism and ambivalence towards environmental management initiatives by individual members;

dysfunctional attitudes to change which can have negative impacts on both the change process and the organisation as a whole. Specifically, the sensemaking of individuals highlights university leadership ambivalence towards instigating environmental management measures.

1.3 Synopsis of the Thesis

This thesis employed a qualitative research methodology to explore individual sensemaking of the implementation and practice of environmental management initiatives in four Welsh universities. Through following an interpretive framework the researcher sought to gain the ‘inside view’ (Mason, 2002:56) of social reality; creating findings from individual’s accounts. The data are gathered from 58 semi-structured interviews and the non-traditional use of drawings. The visual data are said to ‘give voice’ (Barner, 2008:120) to the feelings and emotions of the respondent, whilst Gioia *et al.* (1994) propose that “...meaning is most often effectively grasped through symbolic or metaphorical representation” (p. 365). Thus the data provided opportunities to gain the individual’s retrospective understanding of events surrounding environmental management.

The initial first-level analysis of the data (discussed in Chapter Five) revealed seven pertinent organisational themes which informed the individual analysis through the lens of sensemaking, as discussed in Chapters Six and Seven. The seven themes discussed are those of Environmental Management System implementation, Environment Champion, Proactive Leadership, Individual Actions, Top Management support, Competition with other universities and the Importance of a ‘green’ image.

These themes enabled a macro-level discussion of environmental management across and within the four case studies, following Eisenhardt (1989).

Individual sensemaking of environmental management implementation and practice is discussed through Chapters Six and Seven. A diverse sample of four individuals from each of the case studies was selected for detailed analysis. In Chapter Six, individual sensemaking of environmental management implementation and practice at Cardiff and Swansea universities is discussed, whilst individual sensemaking at Glamorgan and Swansea Metropolitan universities is discussed in Chapter Seven. The analysis highlights the relationships between the theoretical concepts of power, identity, knowledge and resistance within organisations in relation to sensemaking of change events. Through their sensemaking, members reveal the dysfunctional behaviours of organisational cynicism and ambivalence by individuals and leadership towards environmental management; the behaviour of leadership is described as a 'latent' resistance in this research. This thesis concludes with a discussion of the negative effects of organisational cynicism and ambivalence and the implications for leadership during change events.

This Chapter continues with an overview of environmental management within universities which is followed by an introduction to university characteristics and the concept of 'new managerialism'. The Chapter goes on to discuss the drivers for environmental management within the higher education sector and, in particular, Welsh Assembly Government strategies to combat carbon emissions and pollution.

1.4 Overview of Environmental Management within Universities

The environment and the concept of being ‘environmentally friendly’ have come to the forefront of public attention by claims of man-made climate change through increased carbon emissions. This in turn leads to a strong argument for the implementation and practice of environmental management initiatives within organisations, including universities, to reduce energy consumption and the use of natural resources and so help to reduce the level of carbon emissions. The implementation of environmental management initiatives is a major challenge for organisational leaders and there is, therefore, an urgent pressure to further understand managing change initiatives such as those which instigate and develop environmental management.

This thesis highlights the strong external drivers for universities in Wales to implement environmental management measures through UK legislation, Welsh Assembly Government strategies and higher education initiatives. In particular, strategy provided by the Higher Education Funding Council for Wales states that higher education institutions are to implement environmental policy and appropriate environmental management systems. The rationale for this thesis is enforced through the information provided in this Chapter by highlighting the legislative and Welsh Assembly Government’s strategic objectives for higher education institutions to embrace environmental management.

The four universities in this research take part in the People and Planet Organisation’s ‘Green League’ (discussed in Chapter Two) which is a compilation of environmental information gathered from 133 universities throughout the UK. The

league table provides information to university members and the public on the environmental performance of universities and as such acts as an external driver for university management to implement and practice environmental initiatives. Students are also active in comparing environmental information on universities, and as such the Green League could be used to gain a competitive advantage between universities. The league standings for the universities in this case study provide justification for this research to take place in South Wales. The league standings for 2007 to 2010 highlight the disparities that exist between these universities in relation to their environmental management practices, and the results tell their own story of environmental management at each university.

The debate for environmental management within universities is strengthened by the following statement issued by the Association of University Leaders for a Sustainable Future:

“Higher education is beginning to recognize the need to reflect the reality that humanity is affecting the environment in ways which are historically unprecedented and which are potentially devastating for both natural ecosystems and ourselves. Since colleges and universities are an integral part of the global economy and since they prepare most of the professionals who develop, manage and teach in society's public, private and non-governmental institutions, they are uniquely positioned to influence the direction we choose to take as a society...the success of higher education in the twenty-first century will be judged by our ability to put forward a bold agenda that makes sustainability and the environment a cornerstone of academic practice” (The Association of University Leaders for a Sustainable Future, n.d.).

1.5 University Characteristics

The management literature highlights the growing need for university management to take account of business measures, being made accountable for their public funding and to become more efficient and effective (Gioia and Chittipeddi, 1991).

This need for accountability has implications for the role of management and staff members, reflecting the changing face of universities and as such, indicates the need for universities to change their behaviours and the need to incorporate initiatives such as environmental management into their everyday working.

Universities are seen as being conservative and resistant to change (Dearlove, 2002; Velazquez *et al.*, 2006; Ferrer-Balas *et al.*, 2010). Change within universities is revealed as slow and incremental (Stephens and Graham, 2010), yet with change being seen as radical, Lozano (2006) proposes incremental change to reduce resistance. The concepts of incremental and continuous improvements are supported by Velazquez *et al.* (2006). Given these characteristics, achieving sustainable development and environmental goals has implications for university management. Sharp (2002) makes the important observation that due to the inherent nature of universities and their complexity, it is not possible to achieve change solely through a change programme and “rationally executed strategy” (p. 133) but more through a large number of people setting priorities and “...establishing new routines and structures despite local conflicts and set-backs” (*ibid.*). However, unique decision-making structures (Clarke and Kouri, 2009) and the prevailing ‘campus culture’ (Dahle and Neumayer, 2001:153) act to predict university behaviour, as Stephens and Graham (2010) highlight that culture impacts on the ability to change, but that it is difficult to change culture. Universities have an impact on their localities through the number of staff and students and the size of their campus, and with this in mind Alshuwaikhat and Abubakar (2008) call for university management to implement environmental management practices within “...campus operations, research and teaching and strive to conserve natural resources” (p. 1784). Some universities

recognise the need to adapt in order to change the values and attitudes of both staff and students (Ferrer-Balas *et al.*, 2010:608), and so to understand this concept, several studies have been made of the characteristics of universities and of why universities operate as they do (Sharp, 2002; Spellerberg *et al.*, 2004; Koester *et al.*, 2006). Whilst it is important to note the unique characteristics of universities, it has been shown that business models of sustainability and environmental management can be applied to university campuses with universities learning from and eventually leading business on environmental initiatives (Walton and Galea, 2005; Sharp, 2002). Christensen *et al.* (2009), Clarke and Kouri (2009) and Marans and Edelstein (2010) highlight the need to engage the whole campus in implementing environmental management measures, whilst Wright (2006) shows that consulting with stakeholders during implementation planning has been shown to be an effective method for generating ideas and for sharing ownership of the process. Koester *et al.* (2006) advocate a whole-systems approach to campus greening which encompasses "...academic content, administrative policies and facilities management arenas" (p. 769), recognising that a university is made up of potentially conflicting parts which need to be brought together to enable successful environmental management.

1.6 New Managerialism

The Further and Higher Education Act of 1992 which created 41 new universities from existing polytechnics and colleges informs the choice of universities for this case study research which selected two pre-1992 and two post-1992 universities. Dearlove (2002) argues for the need for changes in higher education due to the resulting external pressures, such as the shift from an elite to a mass system of education, the demand for more vocational and skills-based education and the

increase in reliance on public funding requiring universities to become more cost effective and to be run on more business and competitive grounds. The characteristics of new managerialism emphasise importing ideas and practices from the private business sector into the public sector. These include efficiency and effectiveness measures and the imposition of external accountability measures such as performance indicators, league tables, benchmarking and target setting (Deem and Brehony, 2005). Deem (2003) suggests that new managerialism has permeated UK universities because of the external pressures and policy changes, with non-managerial staff maintaining that universities are 'awash with managerialism'. However, overall findings point to a hybrid managerialism of established forms of management and newer elements. Old universities, those in existence prior to 1992, were based on a collegiate system of governance with academics enjoying a high degree of autonomy. However, this traditional autonomy has since been eroded through external pressures to become more accountable. Dearlove (1998) highlights the trend to move away from the collegiality to managerialism as decisions are taken by separate management, reducing the autonomy for academics, whilst the increase in public funding for universities and the requirement for them to become more efficient and accountable led to the advent of new managerialism (Deem and Brehony, 2005). Some of the features of new managerialism within universities manifest themselves as higher workloads, more emphasis on team work, the introduction of cost centres, internal and external surveillance and the increased proportion of managers (Deem and Brehony, 2005). However, Dearlove (1998) makes the important observation that managerialism tends to mean more power in the hands of the Vice-Chancellors and managers remote from academic work. Research carried out to examine the permeation of new managerialism into

universities finds that both old and new universities are now more managed and bureaucratic, especially with regards to efficiency, performance monitoring and target setting. Collegiality is being replaced by overt line-management (Deem, 2003). The purely managerial roles and career managers in permanent posts are mostly found in the post-1992 universities, whilst academics in pre-1992 universities tend to assume management posts on a temporary basis returning to academic research afterwards (Dearlove, 1998; Deem, 2003). Deem (2003) calls these academics the 'reluctant' managers. With greater power in the hands of Vice-Chancellors from managerialism it is important to generate support for change initiatives from faculty and departments through giving additional powers to Deans and Heads of Department to counter the top-down management and to gain support from academics who may resist managerial control (Dearlove, 1998; 2002). With universities having been found to be deeply conservative towards organisational change, Dearlove (1998; 2002) calls for the need for the leadership to bring aspects of the university together, yet this leadership has been found to be missing. Whilst Vice-Chancellors claim to be engaged in strategic activity, some research suggests that they are more reactive and fire-fighting (Borgh *et al.*, 2000, in Deem and Brehony 2005:225) whilst Dearlove contends that "...universities are over-managed and under-led" (2002:270).

1.7 Background to Environmental Management

Historically, some businesses have focused on a form of environmental management by working in harmony with nature. However, in the 1970s and 1980s, environmentally orientated business management began to be promoted more widely through a mix of personal conviction to ecological principles and a movement for

business to look beyond profit-seeking and to adopt environmental behaviours. Through the 1980s concerns were raised regarding multinational corporations and the impact of their activities on the environment, particularly in developing countries, after which some corporations were promoting themselves and their products as 'clean and green'. With the increasing public demand for pollution prevention and environmentally friendly products there was a drive to develop cleaner technologies and production processes and increasing amounts of environmental legislation was brought in to enforce environmental behaviour. More voluntary encouragement was given by the introduction of environmental management standards such as International Organization for Standardisation ISO 14000 series and the EU Eco-Management and Audit Scheme which were developed from the quality management schemes (Schaltegger *et al.*, 2003:33). The overall aims of environmental management are to reduce the impacts of organisational activity on the environment, which can be achieved by adapting products and processes, organisational structure, stakeholder attitudes and by moving general business conduct away from environmentally damaging activities and towards those with no negative impact on the environment (Schaltegger *et al.*, 2003:28). Callinan (cited in Sroufe and Sarkis, 2007) proposes that a "...core objective of corporate environmental management is to manage change within an organisation so that it does not degrade the natural environment" (p. 223).

1.8 Drivers for Environmental Management within Higher Education

The following section provides details of external drivers for environmental management within higher education in South Wales through international

declarations, UK Government reviews and Welsh Assembly Government strategic drivers for implementing environmental initiatives.

1.8.1 International Declarations

The 'Stockholm Declaration' of the United Nations Conference on the Human Environment (1972) raised the issue of the natural environment within all sectors of the community, including education (UNESCO, 1972). Following on from the 'Stockholm Declaration' in 1972, the Talloires Declaration of 1990 created a ten-point action plan for incorporating sustainability and environmental awareness into universities from around the world (Anon., 1990). The Talloires Declaration was the first of its kind made by university administrators to commit to environmental sustainability in higher education and has now been signed by 429 university presidents and chancellors in 52 countries (as at 22nd October, 2010), with 17 new signatories during 2010. As of October 2010 there were eleven UK university signatories, yet this did not include any of the four universities in this research. The Association of University Leaders for a Sustainable Future serves as the Secretariat for signatories of the Talloires Declaration whilst supporting sustainability through the critical foci of teaching, research, operations and outreach at colleges and universities worldwide through publications, research, and assessment. Other declarations have followed whereby university representatives have signed up to taking action against the environmental impact of universities.

1.8.2 UK Government Reviews

Following in the spirit of the Talloires Declaration, the Toyne Report, published in 1993, was the result of the UK Government study of the environmental performance

in the higher education sector. One of the key recommendations of the Toyne Report was

“...that every Higher and Further Education institution should formally adopt and publicise (by 1994/1995) ... a comprehensive environmental policy and an action plan” (People and Planet, 2006).

In the follow-up report of 1996, the Khan Review, it was stated that higher education institutions had shown considerable disregard for the key findings in the Toyne Report and that the vast majority of institutions had failed to implement this key recommendation as noted above. Subsequently, by 2003 only three UK universities were certified to the environmental management system ISO 14001¹, these being the University of Glamorgan, the University of Wales School of Medicine and Leeds Metropolitan (People and Planet, 2006). The University of Wales School of Medicine has subsequently been adopted into Cardiff University.

The UK Environmental Audit Select Committee published its report ‘Environmental Education: Follow-up to Learning the Sustainability Lesson’ in April 2005 which discusses education for sustainable development and concludes that

“Ignorance of an individual's role in contributing damage to the environment, such as negative bio-diversity impacts, unsustainable use of natural resources and climate change, is inexcusable and frankly dangerous” (Environmental Audit Committee, 2005:3).

In its strategic statement ‘Sustainable development in higher education’ published in February 2009, the Higher Education Funding Council for England (HEFCE) sets

¹ ISO 14001 is the internationally recognised standard for environmental management systems.

out the revised strategic statement and action plan on sustainable development in the higher education sector, noting that

“...it is crucial that the sector contributes strongly to sustainable development. It can do so by training and expanding these young minds; researching answers to challenges and informing public policy; showing its own understanding and commitment through careful campus management; and by being a responsible employer and active member of the business and local community” (HEFCE 2009/03:1).

Whilst both Fisher (2003) and Price (2005) point to the importance of the Talloires Declaration as a commitment to environmental education, leadership and research, Price goes on to state that by 2004 there were still many higher education institutions in the UK without a formal environmental policy or action plan. The Talloires Declaration and the Toyne Report have been shown to be significant drivers for environmental management within some universities, although the declarations provide policy at a strategic level but not guidance for implementation of environmental measures (Price, 2005; Koester *et al.*, 2006; Herremans and Allwright, 2000).

The characteristics of universities, those of being conservative and resistant to change, lie uncomfortably with the need to become more accountable and also with the concept of new managerialism. However, the drivers for environmental management discussed in this section highlight the external pressures on university leadership to overcome cultural indifference to change, and to implement environmental management initiatives.

1.9 Welsh Assembly Government Strategies

The following section provides an overview of the strategies developed by the Welsh Assembly Government which include environmental measures in the higher education sector. These strategies provide the higher education sector in South Wales with the external drivers for instigating environmental management initiatives.

1.9.1 One Wales: One Planet

The 'One Wales' strategy document, published June 2007, commits the Welsh Assembly Government to achieving an annual carbon reduction in emissions equivalent to 3% per year by 2011 in areas of devolved competence, which includes education. Following on from this the Welsh Assembly has laid out its vision of sustainability in Wales in the new Sustainable Development Scheme for Wales 'One Wales: One Planet' which was launched in May 2009. The Scheme requires all organisations in Wales to actively commit to sustainable development and the goal has been set to reduce the ecological footprint in Wales to the 'global average availability of resources' (stated as 1.88 hectares per person, with each Spatial Plan Area making its full contribution) over the lifetime of a generation. To achieve this goal the total resources used in daily life will have to reduce by two-thirds, including measures to radically reduce the use of carbon-based energy by 80-90% resulting in a similar reduction in greenhouse gas emissions (supporting the previous commitment of 3% reduction in emissions per year). Other measures include moves to produce as much electricity by renewable sources by 2025 as is consumed, moving towards becoming a zero waste nation and diverting waste from landfill by 2025 and organising life and work styles to travel much less by car (Welsh Assembly Government, 2009b:17).

1.9.2 The Welsh Waste Strategy

The Welsh Assembly Government has produced a draft strategy document 'Waste Strategy 2009-2050: Towards Zero Waste' which proposes to build on the 'Wise About Waste: the National Waste Strategy for Wales' (Welsh Assembly Government, 2002). The 2009 strategy sets out long term aims with two main targets - all sectors to recycle 70% of waste by 2025 and to have zero waste to landfill by 2050. Working alongside UK waste legislation, this strategy clearly has an impact for universities in Wales to reduce and recycle more of their waste (Welsh Assembly Government, 2009c).

1.9.3 Climate Change Strategy

The Welsh Assembly Government has developed a Climate Change Strategy (October 2010) which brings together high level policy statement and a programme of action. Part of the Strategy will be to reduce carbon emissions from the public sector, including higher education institutions. Key areas for improvement in non-residential buildings are stated as: Improving efficiency in heating and cooling buildings; better management of energy, for example with motion-sensor lighting or lower thermostat temperatures; use of more efficient lights and appliances and the use of micro-generation technologies (Welsh Assembly Government, 2010).

1.9.4 Welsh Higher Education Initiatives

Specific attention to environmental measures in the higher education sector in Wales has been reported by the National Audit Office Wales report 'Energy and Water Management in the HE sector in Wales' (Wales Audit Office, 2005). The scope of the audit was to identify areas to maximise value for money across the public sector

in Wales. The twelve higher education institutions which make up the higher education sector in Wales spent in excess of £11 million on energy and water in 2003-2004 (p. 7). The report aims to identify financial savings which could be made from measures to improve energy and water efficiency through comparison with existing benchmarks and takes into consideration the extent to which energy and water management across the institutions reflected good practice. In particular, the report estimates there could be savings of at least £500,000 per annum through improved energy and water efficiency across the sector (p. 30). The report goes on to conclude that an energy and water management policy is an essential ingredient of effective energy and water management and should help to secure the commitment of senior management to tackling this issue (Wales Audit Office, 2005).

The Higher Education Funding Council for Wales Corporate Strategy and Corporate Plan 2009 - 2010 to 2011 – 2012 includes in its strategic objectives and outcomes for 2012 as enabling the higher education sector in Wales to being well-governed and managed as evidenced by:

- estates strategies which are consistent with the Strategic Plans, and fully reflected within the financial forecasts of the institution;
- sustainable procurement strategies within value for money programmes; and
- appropriate and effective environmental management systems (HEFCW, 2009a: 26).

However, the Higher Education Funding Council for Wales Corporate Strategy 2010-11 to 2012-13 omits reference to environmental management, merely stating that carbon management will be monitored (HEFCW, 2009b:25).

1.9.5 Education for Sustainable Development and Global Citizenship

We are currently within the UN Decade of Education for Sustainable Development (2005-2014) which is the driver for the Education for Sustainable Development and Global Citizenship movement in Wales. Education for Sustainable Development and Global Citizenship is an integral approach which involves the whole curriculum and management of the education institution. The Welsh Assembly Government launched the 'Education for Sustainable Development and Global Citizenship (ESDGC): A Strategy for Action' during 2006-2007. According to the January 2008 update, the higher education institutions in Wales were requested by the Higher Education Funding Council for Wales to include a section on Education for Sustainable Development and Global Citizenship in their strategic reports for 2007. In addition to this, the January 2009 update Action Point 6:1:2 (Welsh Assembly Government, 2009a) states that Sustainable Development and Global Citizenship should now be included in the strategic plans. This exercise will provide the Higher Education Funding Council for Wales with baseline information for future reference and analysis and to ensure that the developments proposed for the higher education sector are in line with the Welsh Assembly Government's requirements (Welsh Assembly Government, 2008:57). Every Vice-Chancellor of each higher education institution was requested to nominate an Education for Sustainable Development and Global Citizenship representative to act as a conduit for information in and out of the institution. These representatives will provide input into developing projects and to help focus energy on future developments resulting from the strategy. All higher education institutions in Wales are being encouraged to practise sustainability and global citizenship in addition to these issues being taught and researched. The Strategy states that each institution should have, and implement, a policy for the

sustainable management and global awareness of each institution. This policy should cover the obvious environmental issues of energy, waste, water and transport along with social and economic issues. All of the higher education institutions are being encouraged to commit to, and work with, the Welsh Sustainable Procurement Initiative (Welsh Assembly Government, 2008:63). The development of environmental management systems is being led by the Higher Education Funding Council for Wales. Action Point 6.3.1 of the ESDGC Strategy states that:

“All HE institutions are encouraged (via good practice examples) to develop a suitable environmental management system (EMS) and equivalent measures which cover all their operations in order to minimise their overall resource use to sustainable levels” (Welsh Assembly Government, 2009a:60).

Funding was allocated to the Higher Education Funding Council for Wales during 2007-2008 to facilitate the development of suitable environmental management systems within higher education institutions. According to the ESDGC Strategy Update, January 2009, this funding has been released and the institutions are required to submit plans outlining their proposals for the development of appropriate, externally certified environmental management systems over the next three years, that is, 2009-2011 (Welsh Assembly Government, 2009a:55). The Higher Education Funding Council for Wales Operational Plan 2009 to 2010 aims to support higher education institutions in developing their contribution to Education for Sustainable Development and Global Citizenship, but makes no separate mention of environmental management initiatives or for reducing the use of energy or water in the higher education sector.

The above Welsh Assembly Government strategies and higher education initiatives provide impetus for environmental management within universities in South Wales

in line with current UK environmental legislation. The following Chapter provides an introduction to environmental management implementation and practice within organisations with an overview of current UK environmental legislation and Standards.

1.10 Summary

This opening Chapter has provided a statement of the aims and contributions of this thesis. The research aims are to explore the implementation and practice of environmental management within universities in South Wales through the sensemaking of individual members. This thesis contributes to the literature on change management regarding effective implementation and practice through empirical research undertaken at four case study universities. By focusing on sensemaking this thesis brings a different perspective for assessing environmental practice, contributing to the scant research on individual sensemaking of change within universities. As such, this thesis provides a unique contribution to the existing debate on sensemaking through the exploration of the experiences of university members of environmental management implementation. This Chapter continues with a statement of the characteristics of universities and an overview of the concept of 'new managerialism' which now impacts on universities. Finally, this Chapter provides an introduction to environmental management and Welsh Assembly Government strategies to combat carbon emissions and pollution.

Chapter 2: Introducing Environmental Management

2.1 Introduction

The aim of this Chapter is to introduce environmental management within organisations and in particular the concept of environmental management systems, providing a definition of what they are, the process of implementation and a rationale for their use in an organisation. However, this Chapter is not intended to be a definitive guide to environmental management systems and their implementation. The Chapter provides an overview of pertinent UK environmental legislation and continues with a discussion of the recognised environmental management standards. The importance of implementing environmental management measures is adequately summarised as

“...the task of environmentally oriented business management is to reduce environmental impacts imposed by existing technology in an economic way, as far as possible. Particular emphasis is placed on reducing or removing unacceptable impacts that lead to socioeconomic damage to the present and future quality of life” (Schaltegger *et al.*, 2003:30).

2.2 Facilitating Organisations for Environmental Management

Before continuing with the discussion on UK environmental legislation, environmental management systems and recognised standards in detail it is important to introduce the organisations and partnerships which facilitate environmental management within universities in the UK.

2.2.1 The Higher Education Funding Council for Wales

Education in Wales is a devolved area of responsibility which means that decisions regarding higher education in Wales are made by the Welsh Assembly Government. The Higher Education Funding Council for Wales is funded by the Welsh Assembly

Government and its purpose is to distribute public funding for education and research at the twelve higher education institutions in Wales and therefore it receives funds from, and is accountable to, the Welsh Assembly Government. Being a Welsh Assembly sponsored body, the Higher Education Funding Council for Wales receives an annual remit letter which outlines priority work areas for the following year. The Welsh Assembly Government's long term strategy for higher education in Wales, 'Reaching Higher' (Welsh Assembly Government, 2002) sets out its vision of how the higher education sector will contribute to the achievement of the education and lifelong learning programme to 2010. Within this, the strategy sets out a number of targets to be achieved by 2010 relating to a number of issues including reducing overhead costs. Although no actual figures are given for this, the target is to reduce administration costs as benchmarked against those in the rest of the UK. Administration costs include academic departmental costs (excluding academic staff costs), expenditure on academic services and on administration and central services (excluding expenditure on premises). However, there is no mention here of savings specifically with regards to energy use or for the lowering of carbon emissions within higher education.

The Higher Education Funding Council for Wales also provides advice to the Welsh Assembly Government on the funding needs, aspirations and concerns of the higher education sector and promotes Welsh interests in the wider UK higher education arena. One example of funding available to institutions is the 'Capital Investment Fund 2008-09 to 2010-11' which states that funding must be used only for investment in physical infrastructure, including "...measures to reduce

environmental impact and carbon emissions, including measures to improve energy and or water efficiency” (HEFCW, 2008).

Following the National Audit Office Wales report titled ‘Energy and Water Management in the Higher Education Sector in Wales’, published in March 2005, the Higher Education Funding Council for Wales has worked with the Carbon Trust to develop and implement the recommendations. Two of the principle recommendations were to develop effective systems of targeting and monitoring, and the requirement for the Higher Education Funding Council for Wales to develop suitable indicators to monitor energy and water performance and to hold institutions to account (HEFCW, 2006). The report also recommended the development of a consistent approach to benchmarking energy and water use as being developed by The Higher Education Environmental Performance Improvement Project (HEEPI). After a review of existing systems for targeting and monitoring at each higher education institution in Wales, the potential was identified for a consistent system of automated targeting and monitoring in line with those already in place at Cardiff University. In August 2006 the Welsh Assembly Government announced that specific funding would be made available to develop this approach across the higher education sector in Wales. In April 2007 a total of £3.8m was allocated to install integrated systems of ‘sub metering’ to develop targeting and monitoring, covering at least 90% of energy and water consumption. Once installed, the meters would provide consumption data to an energy bureau service which in turn would work with the Carbon Trust to further reduce energy consumption (HEFCW, 2007).

2.2.2 The Carbon Trust

The Carbon Trust offers products and services to organisations in the private and public sector to help reduce their carbon emissions. The Trust also provides guidance specific to the higher and further education sector to reduce energy use and carbon dioxide emissions. The annual energy costs for the Higher Education sector are estimated at £200 million, resulting in carbon dioxide emissions of around 3 ½ million tonnes per year. Overall, student residences and offices account for around 25% each of the energy use in the sector. With lighting accounting for 10% of energy use but 25% of the costs and with heating and hot water accounting for 80% of energy use and around 50% of costs, the Trust estimates that there could be energy savings of around 20% by simply using no and low cost techniques and technologies (Carbon Trust, 2007).

Organisations which are covered by the Carbon Reduction Commitment (CRC) Energy Efficiency Scheme (including universities) can work towards attaining the Carbon Trust Standard. The Standard was developed by the Carbon Trust in 2007/2008 to encourage good practice, and by achieving the Carbon Trust Standard, organisations are able to reduce the costs of participation in the first three years of the Carbon Reduction Commitment scheme. The Carbon Reduction Commitment Energy Efficiency Scheme works by participants purchasing carbon allowances to cover their emissions, with participants' performance being ranked in a league table. Those organisations which achieve the Carbon Trust Standard automatically gain a higher ranking in the league table in the first phase of the Carbon Reduction Commitment, because the Standard is designated as an 'early action metric' in the Carbon Reduction Commitment. It is reported that the financial benefits could be

significant along with improving the organisations' environmental reputation (Carbon Trust Standard, n.d.). To achieve the Carbon Trust Standard, an organisation must meet three criteria, being to accurately measure its carbon footprint, to achieve a reduction in its footprint year on year and to demonstrate good carbon management. Once these criteria have been met, the organisation can apply for the Standard by being assessed by an independent assessor. The organisation will need to show that it has measured, managed and reduced its emissions. The cost of the assessment depends on the size of the organisation and the amount of help it requires to complete the process.

2.2.3 The Environmental Association for Universities and Colleges

The Environmental Association for Universities and Colleges (EAUC) was formed in 1996 and is the environmental and sustainability champion within higher education in the UK. Its aim is to raise the profile of environmental management and to facilitate the improvement of environmental performance within its 300 member institutions. A key role for the Environmental Association for Universities and Colleges is to share information and best practice between its members whilst working closely with National and Local Government, Funding Councils and Regulators. A regional network has been set up to support members and to promote possibilities for local networking and accessing regional funding. The Environment Manager at Swansea Metropolitan University was previously the regional contact for Wales.

The Environmental Association for Universities and Colleges currently organises the 'Green Gown Awards' which recognise best practice for sustainability and the

environment over 12 categories within universities and colleges across the UK. The awards provide recognition for the achievements of the higher and further education sector with regards to their improved sustainability initiatives and in 2009 received 178 applications for projects being run across the UK. In 2009 the Environmental Association for Universities and Colleges instigated another initiative for universities to report on their environmental management, 'Universities That Count', which is a benchmarking and performance improvement programme which aims to encourage and inform a process of improvement within environmental management. The results of the Environment Index show that the average score for the 55 universities that took part in the process is below that of the business sector average, but overall this is seen as a useful benchmarking exercise to encourage improvement within the higher education sector. Of these 55 universities two are included in the case study research, Swansea Metropolitan and University of Glamorgan, with Swansea Metropolitan achieving one of the highest placements for strategy and the University of Glamorgan for climate change within the Environment Index.

2.2.4 People and Planet Organisation

People and Planet is a nationwide student campaigning organisation focusing on world poverty, human rights and the environment. They have campaigned for Fairtrade in UK universities, ensuring that around 70 universities now have Fairtrade status, and have transformed environmental performance throughout the higher education sector through their 'Go Green' campaign, launched in 2003, and the 'Green League' which has been published since 2007. The 'Green League', partly funded by the World Wide Fund for Nature and administered by the Environmental Association for Universities and Colleges, attempts to push universities to set an

example on sustainability and the environment by rating their achievements. In 2010, the league ranks 133 universities with four universities listed as not having taken part in the exercise. This is compared to 2009 when a total of 127 out of a possible 131 eligible universities were ranked, whereas previously in 2008 there was only data available from 119 universities (People and Planet, n.d.).

People and Planet collate data from a number of sources including a questionnaire completed by the universities, the Fairtrade Foundation, the National Union of Students and the Higher Education Funding Council for England and for Wales. The questionnaires are analysed by a team of student researchers and each university is then graded and ranked on its achievements. In 2010 data were collected on eleven categories, these being: Publicly Available Environmental Policy; Environmental Management Staff; Environmental Auditing and Management Systems; Ethical Investment Policy; Carbon Management; Sustainable Procurement and Fairtrade; Student and Staff Engagement; Energy sources; Waste Reduction; Carbon emissions per head and Water consumption. Points are then allocated for the standards of achievement within each category and the grade boundaries are set after the scores are collated.²

² The full methodology of the 'Green League' is available at www.peopleandplanet.org/greenleague/methodology-2010. Retrieved 23rd March 2011.

The results from all of the league tables published to date for the four universities in the study are shown in the table below. In 2010, results were included for 133 UK universities:

Table 2:1 Extract of Results: People and Planet Rankings, 2007 to 2010

University	2010 Rank	2009 Rank	2008 Rank	2007 Rank
Cardiff	77	17	84	82
Swansea	116	65	74	46
Glamorgan	13	12	13	4
Swansea Metropolitan	22	21	17	27

(Full results are available at www.peopleandplanet.org/greenleague)

As can be seen from the results, both the University of Glamorgan and Swansea Metropolitan have performed the most consistently over the four year period. However, the categories have changed over the period which could have a bearing on the results and with this in mind some of the environmental managers in this research feel that they are trying to ‘hit a moving target’ and that they may not be receiving credit for all the results they are achieving.

2.2.5 Higher Education Environmental Performance Improvement

The Higher Education Environmental Performance Improvement (HEEPI) project is funded under the Leadership, Governance and Management initiative of the Higher Education Funding Council for England. The project is based at, and led by, the University of Bradford. The project has supported operational improvement in areas such as buildings, energy and water efficiency, environmental management systems,

transport and waste. To facilitate this work the project organised events, published case studies with guidance documents and reports, compiled energy benchmarking reports and previously organised the Green Gown Awards which are now organised by the Environmental Association for Universities and Colleges, as noted above.

2.2.6 The South West Wales Higher Education Partnership

The South West Wales Higher Education Partnership is a collaboration between three Welsh higher education institutions. Under the partnership Swansea University, Swansea Metropolitan University and Trinity University College, Carmarthen, were awarded £7.5 million by the Higher Education Funding Council for Wales (from the Reconfiguration and Collaboration Fund) to implement change in key administration services. The funding was provided by the Welsh Assembly Government under the Reaching Higher agenda to improve performance and value for money from public services. The collaboration is expected to lead to the integration of a range of services and administration functions and will also give a coordinated approach to environmental sustainability and estates management (HEFCW News, 1st July 2007). The South West Wales Higher Education Partnership Sustainability Project has been set up to promote sustainability on campus for staff and students. The project aims to better manage energy and water consumption, improve recycling and to deliver a high profile awareness campaign. The project funds two project officers who have been put in place to set up the measurement and monitoring of energy and water use, monitor recycling and to collate information with regards to implementing an environmental management system. A 'Green Guide' is produced by the Project, which is now available in hardcopy and online, to give information to staff and students on various environmental matters such as recycling, saving energy, reducing

water wastage and pollution and sustainable transport to and from each institution. Projects such as the South West Wales Higher Education Partnership are important as they enable Welsh universities to improve their environmental management and to become legally compliant.

2.3 Overview of UK Environmental Legislation

UK environmental legislation and regulations are being continually updated to keep abreast of environmental requirements. This section provides an indication of some of the relevant environmental legislation and regulations applicable to UK universities. The most pertinent environmental legislation for universities to follow applies to air, waste, energy and water as discussed here. The following legislation provides an external driver for universities in Wales to reduce natural resource use and to reduce pollution.

2.3.1 Air Legislation

The Clean Air Act 1993 applies to all organisations operating furnaces, boilers or incinerators. The Act gives powers to local councils to control the output of industrial smoke to improve local air quality and to meet EU air quality standards. In addition to this, the Climate Change Act 2008 became law on the 26th November 2008 and was brought into effect to “...improve carbon management and help the transition towards a low carbon economy in the UK” (Department of Environment and Climate Change, n.d.). One of the key provisions of the Act is to set a target for the year 2050 for the reduction of greenhouse gas emissions, providing legally binding targets on the reduction of green house gas emissions of at least 80% by 2050, with reductions in carbon dioxide emissions of at least 34% by 2020, against a

1990 baseline. The Act also provides for a carbon budgeting system which caps emissions over five-year periods in order to reach the 2050 target. Public sector organisations are required to report to the government on their risk assessments and action plans with regards to implementation.

The Climate Change Levy Regulations 2001 is a tax on the use of non-renewable energy by businesses and the public sector, with the aim being to reduce energy consumption and pollution levels. Non-renewable energy is defined as that being from the national grid, gas, coal and liquefied petroleum gas. The levy is paid through energy bills and is charged at a set rate of pence per fuel used. However, good quality combined heat and power systems are exempt from the scheme along with energy from renewable sources.³

2.3.2 Waste Legislation

There is a wide range of waste management legislation in the UK which is controlled by European Directives and Regulations. UK controls originate from the Control of Pollution Act 1974 which in turn were strengthened by the Environmental Protection Act 1990. The concept of 'Duty of Care' was introduced under the Environmental Protection (Duty of Care) (Wales) (Amendment) Regulations 2003 which came into force on the 31st July 2003 allow waste collection authorities in Wales to serve notices on organisations required to keep written descriptions of waste and transfer notices, and to require them to produce such documents to the authority within a specified time. Any organisation that imports, produces, carries, keeps, treats or disposes of waste is subject to a duty of care whereby they must take all reasonable

³ The complete list of air legislation is available at www.netregs.gov.uk/netregs/legislation/current/63622.aspx Retrieved 23rd March 2011.

and applicable measures to control and deal with their waste. The UK government is keen to reduce the amount of waste which is sent to landfill sites and several changes to environmental measures came into force on the 1st April 2009 to affect this, including an increase in the Landfill Tax rising by £8 to £40 per tonne with further tax increases in due course (ENDS, 2009).

The Waste Electrical and Electronic Equipment (Amendment) Regulations 2007 (WEEE) came into force on the 1st January 2008 to encourage the re-use of whole appliances in the WEEE system which affects the way universities dispose of their electrical equipment such as computers, audio-visual, white goods and laboratory instruments. The WEEE Regulations make producers of electrical and electronic equipment responsible for the financing of the recovery and recycling of such equipment at the end of life. However, from 1st July 2007, in certain circumstances, the regulations also place responsibilities on end-users (in this case the universities) of WEEE to be responsible for the recovery and recycling of this equipment when it becomes waste. The WEEE regulations also raise issues concerning contract negotiations for the supply of new electrical and electronic equipment and who takes responsibility for financing the recovery and recycling when the equipment becomes waste. All of the WEEE waste should be separated from the main waste stream and not put into the general waste or skips and as such universities owe a 'duty of care' for the safe storage and disposal of WEEE waste.⁴

⁴ The complete list of applicable waste legislation is available at www.netregs.gov.uk/netregs/legislation/current/63638.aspx Retrieved 23rd March 2011

2.3.3 Energy Legislation

The UK's first mandatory carbon trading scheme, the CRC Energy Efficiency Scheme (formerly known as the Carbon Reduction Commitment), officially began in April 2010 with the aim to reduce the level of carbon emissions currently produced by the larger 'low energy-intensive' institutions by approximately 1.2 million tonnes of carbon dioxide per year by 2020. It is expected that any institution spending around £1,000,000 on electricity would be included in the scheme. Under the scheme, such institutions will have to purchase carbon allowances in advance to cover their carbon emissions, which will involve measuring and recording energy use and calculating the carbon dioxide emissions (not including transport emissions).

The Energy Performance of Buildings (Certificates and Inspections) (England and Wales) (Amendment) Regulations 2009 came into force on the 10th August 2009. The Regulation applies to new and existing public buildings which have been substantially modified and which are over 1000 square meters in size (UK Government, 2009). Display Energy Certificates state the actual energy usage of a building. Their aim is to raise awareness of the energy consumption of buildings and encourage energy efficiency measures, with measurements being taken of the consumption from the electricity, gas and other meters. Valid for one year, the certificate shows a colour-coded 'A to G' performance rating, based on annual carbon dioxide emissions per square metre of floor area and must be displayed in a public area of each building. Other criteria for having a Display Energy Certificate include that the building must be occupied by an institution providing a 'public service' to a large number of people and that it is frequently visited by members of the public. However, students are considered to be 'members of the public' which

means that virtually all university or college buildings would require a Display Energy Certificate, including halls of residence, lecture theatres and laboratories as well as social and leisure facilities (ENDS, 2008).⁵

2.3.4 Water Legislation

With the introduction of the Water Act 2003 all public bodies now have a duty to conserve water. By monitoring water use and comparing to benchmarks it is said to be possible to save up to 50% of the annual water bill. The Water Act 2003 places a duty on all public bodies to take into account, where relevant, the conservation of water supplied to premises. This means that all public bodies should look to reduce the water used on their premises to an efficient level. However, there are currently no statutory targets for reducing water use in educational establishments. With an average water consumption of 4.6 m³ per person in government offices, there remain significant opportunities to reduce water use (Environmental Association for Universities and Colleges, n.d.: 15).⁶

Having discussed aspects of current environmental legislation, the following section provides an in-depth introduction to the concept of environmental management, environmental management systems and implementation, including management standards. The section begins with an overview of environmental policy and management systems.

⁵ The complete list of energy legislation is available at www.netregs.gov.uk/netregs/legislation/current/63626.aspx Retrieved 23rd March 2011

⁶ The complete list of water legislation is available at www.netregs.gov.uk/netregs/legislation/current/63640.aspx Retrieved 23rd March 2011

2.4 Environmental Policy, Management Systems and Standards

2.4.1 First Steps: The Environmental Policy

An environmental policy formally outlines an organisation's commitment to managing environmental issues and can often be the first step towards creating a systematic way of implementing those commitments to environmental management. The policy defines the rules and regulations which the organisation will follow and is said to be a cornerstone of the environmental management system (Sheldon and Yoxon, 2002:87). These policies can take the form of a short statement or bullet points, whereas others are lengthy documents which set out specific objectives and targets (Netherwood, 1998). However, it has been found that some organisations incur problems in implementing environmental objectives as Sadgrove highlights:

“...there is often a gap between what companies aspire to and what they achieve. Environmental affairs is a case in point: inaction is a great problem. There is a danger that once an environmental audit is executed and the policy written, little will follow” (1992:215).

2.4.2 The Basic Management System

The term ‘management system’ refers to what an organisation does to manage its processes or activities so that its products and services meet the objectives it has set itself, for example, by complying with regulations or meeting environmental objectives. Starkey (1998) proposes that a system is “...a number of interrelated elements functioning together to achieve a clearly defined objective” (p. 62). Management system standards, such as those of the International Organisation for Standardisation (ISO), provide a model to follow in setting up and operating a management system. The focus in this chapter will be on management systems designed to integrate environmental measures into an organisation.

2.4.3 Defining the Environmental Management System

An environmental management system is a formal approach to identifying and managing an organisations' environmental impact, although there does not appear to be a definitive definition for this. Environmental management can be seen as "...the management of those activities, products and services of an organisation which have (or can have) an impact on the environment" (Starkey, 1998). Gibson (2005) states that an environmental management system is "...a set of management tools and principles that is intended to help organisations integrate environmental issues into the conduct of their daily business" (p. 25). Although not obligatory, an environmental management system can help to facilitate the implementation of the environmental policy. Similarly, Schaltegger *et al.*, (2003) propose that an environmental management system is

"...a set of management processes and procedures that allow an organisation to analyse, control and reduce the environmental impact of its operations and services to achieve cost savings, greater efficiency and oversight, and streamlined regulatory compliance..." (p. 296).

External organisations, such as the UK Government sponsored Environment Agency, state that an environmental management system is generally a structured and documented system which can be used to manage an organisations' environmental performance and responsibilities, and can be implemented and used by organisations of all types and sizes, and that it provides an organisation with a "...structured framework for identifying, evaluating, managing and improving its environmental performance" (Environment Agency, n.d.). Overall an environmental management system is said to ensure that the environmental goals are met and that the environmental policy is implemented throughout the organisation.

2.4.4 Commitment to Environmental Management

Irrespective of the core aims and priorities of organisations and the importance of the environment to the overall goals of an organisation, the most successful environmental management system will develop where there is senior management commitment to the cause. This is because management commitment will facilitate the adoption of an environmental policy and will enable the implementation of the written policy through the allocation of time, financial and other resources (Netherwood, 1998:41). Netherwood goes on to state that many organisations find it difficult to ensure this commitment even when an environmental policy exists. This could be due to "...low priority of the environment when resources are allocated within departments, existing management pressures and cynicism and apathy towards environmental issues." (1998:41). It is further suggested that environmental managers, or those who are initiating an environmental management system, market the environment as an important issue to senior management by showing how an environmental management system will benefit the organisation as a whole (Ledgerwood *et al.*, 1992). It is commented that where there is already high level commitment to the environment and knowledge of environmental issues, then the adoption and implementation of environmental policy may be less problematic (Netherwood, 1998:42).

2.4.5 Continuous Cycle of Improvement

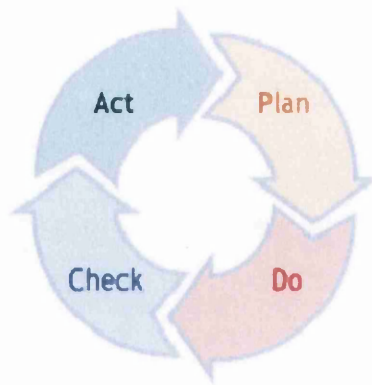
The methodology of an environmental management system is of continuous improvement. Initial objectives and targets for improved environmental performance are set at the outset of the environmental management system and through working towards these goals the performance is regularly checked to ensure the objectives

and targets are being met. As environmental performance improves, organisations can find that they are able to set more stringent targets for the future and hence the environmental performance is being continually improved.

The environmental management system is given the notion of "...a continual cycle of planning, implementing, reviewing and improving the processes and actions that an organization undertakes to meet its business and environmental goals" (U.S. Environmental Protection Agency, n.d.) whilst Schaltegger *et al.*, (2003) state that "ISO 14001 incorporates a feedback loop to environmental management whereby a business plans, implements, controls and takes corrective action to ensure continual improvement in the environmental management process" (p. 100). According to Sheldon and Yoxon (2002) this is described in ISO 14001 as "a process designed to achieve continuing improvements in environmental performance which are consistent with the organisation's policy" (p. 227).

Environmental management systems follow the processed-based approach of management system standards and the 'Plan-Do-Check-Act' operating principle underlies the continuous feedback philosophy used in this management system. The Plan-Do-Check-Act (PDCA) Cycle was originally devised by Shewart and later developed in the 1950s by W. Edwards Deming whilst investigating business processes. In order to identify the sources of variations in a process which caused deviations in product standards, he proposed that the process "...be placed in a continuous feedback loop so that managers can identify and change the parts of the process that need improvements" (Arveson, n.d.), which is illustrated in the following diagram:

Figure 2:1 Plan-Do-Check-Act Cycle



- **PLAN:** Design or revise business process components, including identifying environmental aspects and establishing goals, to improve results. Establish overall objectives and set interim targets.
- **DO:** Implement the plan, including training and operational controls, and measure its performance.
- **CHECK:** Assess the measurements by monitoring actual achievements to objectives set, report the results to decision makers and take corrective action.
- **ACT:** Correct and review plans. Decide on changes needed to improve the EMS and to improve results next time. Learn from mistakes.

(adapted from Arveson, n.d.)

2.4.6 Factors Influencing Environmental Management System Certification

I wish to include here a discussion of why firms implement an environmental management system and what the relation is between an environmental management system and environmental management practices. Weber (cited in Sroufe and Sarkis, 2007:191) suggests that although the many benefits to environmental management system implementation have been discussed in the literature, there remain many unexplored relationships between an environmental management system (EMS),

environmental practices and systems implementation. Particularly, Weber (*ibid.*) points out that

“...neither the links between the EMS, environmental management practice and environmental impacts nor those between the factors influencing the decision to implement an EMS have been fully analysed” (p. 191).

The study by Hamschmidt and Dyllick (2001) aimed to clarify whether a standardised environmental management system had a greater impact on the environmental performance of a firm or if other factors influence environmental performance. The study found that 97% of participants stated that their environmental management system had a significant influence on the environmental performance of the firm. In a later study, Melnyk *et al.*, (2003) found that a certified environmental management system had a greater positive impact on a firm's environmental performance against that of a non-certified system (Weber, cited in Sroufe and Sarkis, 2007:191).

The research study by Weber discussed in Sroufe and Sarkis (2007:194) aimed to discover the factors influencing the implementation of environmental management practices as well as the influence of certified environmental management system against non-certified environmental management system. The study found that most influential factors for implementing environmental measures were self-commitment and business management, which suggest that implementation is motivated by the willingness of management to implement an environmental management system and the business assumption that it pays to be 'green' (2007:200). These results are consistent with those of Bansal and Roth (2000), Henriques and Sadosky (1999) and Hart and Ahuja, (1994). Studies also reveal that a certified environmental management system significantly influences the implementation of environmental

practices and that firms with a certified environmental management system are more likely to implement environmental measures than non-certified firms, leading to a conclusion that certification can be a strong basis for good environmental performance. However, Weber goes on to state that further research is required to measure the impact of environmental management practices on the natural environment (King and Lennox, 2000).

2.5 International Recognition for Environmental Management Systems

2.5.1 International Organisation for Standardisation: ISO 14000

ISO 14000 is in fact a series of international standards concerned with environmental management. ISO 14001 was first published in 1996 and states the specific requirements for an environmental management system. It provides a framework for organisations to follow when developing their own environmental management system, but does not state specific environmental targets to be achieved. It is the only international standard which organisations can be externally certified for. The standard has since been updated to ISO 14001:2004 which provides the requirements for an environmental management system and ISO 14004:2004 which gives general environmental management system guidelines. The other standards and guidelines in the series address specific environmental aspects, including: labelling, performance evaluation, life cycle analysis, communication and auditing. An environmental management system which meets the ISO 14001:2004 requirement is a management tool which enables an organisation of any size or type to identify and control the environmental impact of its activities, to improve its environmental performance continually and to implement a systematic approach to setting environmental

objectives and targets and to demonstrate that these have been achieved (International Organisation for Standardisation, n.d.).

According to The International Organisation for Standardisation Survey of Certifications 2009, at least 223,149 ISO 14001:2004 certificates had been issued in 159 countries world wide at the end of December 2009. The 2009 total represents an increase of 34,334 (+18%) over 2008 figures, when the total reached 188,815 certificates in 155 countries (International Organisation for Standardisation, 2009). In the UK there were 10,912 certifications by the end of December 2009 compared to 9,455 at the end of 2008.

2.5.2 European Union Eco-Management and Audit Scheme

The EU Eco-Management and Audit Scheme (EMAS) is a voluntary initiative designed to improve an organisation's environmental performance. The EU Eco-Management and Audit Scheme originally came into force in 1995 for companies in industrial sectors only, but under the EMAS Regulation 761/01, which came into force in April 2001, the scheme is now open to all economic sectors including public and private services. The scheme gives the registered organisations enhanced credibility and recognition for their environmental management system and recognises those that go beyond minimum legal compliance and continually improve their environmental performance. Under the scheme, organisations are required to produce a public environmental statement on a regular basis which reports on their environmental performance. The environmental statement is independently verified by an auditor of the scheme to ensure its accuracy and reliability. It is a requirement of the Scheme that the organisation has an ISO14001 accredited environmental management system (European Commission, n.d.). Each country has a competent

body which is responsible for the registration of EU Eco-Management and Audit Scheme organisations and in the UK this body is the Institute of Environmental Management and Assessment. The Scheme is open to all public and private service providers as well as public sector organisations operating in the EU and the European Economic Area. Although initially aimed at industrial sites, all organisations which are a single site or multi-sites and corporate organisations can apply. According to the European EMAS Register as at September 2009 there were 4,347 registered organisations and 7,404 registered sites compared with 3,725 organisations and 5,587 sites registered at June 2007(European Commission, n.d.). In the UK there were 66 registered organisations and 333 registered sites during 2009.

The salient differences between ISO 14001 and the EU Eco-Management and Audit Scheme are noted by Krut and Gleckman (1998:16) as they point out that ISO 14001 is a method of standardisation whereas the EU Eco-Management and Audit Scheme is a standard of excellence. The standards also differ in that ISO 14001 was created by an international industry association compared to the EU Eco-Management and Audit Scheme which was created by the European Communities as a voluntary initiative designed to improve organisational environmental performance (Institute of Environmental Management and Assessment, n.d.). Schaltegger *et al.* (2003) point out that the standard-setting organisations such as the International Organisation for Standardisation and British Standards Institute are private institutions which are financed by industry and have formulated standards of environmental management which can be audited against. This should be compared to EMAS which is issued by a public institution and that “...public agencies and regulators institute regulatory rather than voluntary systems” (2003:294).

2.6 UK Recognition for Environmental Management Systems

The following section provides an overview of the UK standards for environmental management systems.

2.6.1 Green Dragon Environmental Standard

The Green Dragon Standard was developed in Wales by Groundwork in Wales and ARENA Network with support from the Welsh Assembly Government, Environment Agency Wales and the European Regional Development Fund. It is suitable for both small and large organisations and recognition can be gained without gaining the formal ISO 14001 certification. The purpose of the standard is to help organisations to become more aware of environmental legislation and to enable financial savings from reduced resource and energy use, create more efficient processes and to decrease waste disposal costs (Groundwork Wales, n.d.). There are five levels of the standard which organisations can gain in turn which makes registration and the implementation of an environmental management system easier, especially for smaller organisations as they can remain at the level most suitable for their needs. Within each of the five levels there are key elements which are assessed and audited. There are approximately 140 organisations registered at all levels of the Green Dragon. The vast majority of these are at Level 2 and only 12 have reached Level 5. After attaining a level, the organisation receives a certificate (or plaque for Levels 3 to 5) and is registered on the Green Dragon website. An annual audit is carried out to ensure compliance with each level attained. The benefit to smaller organisations of this standard is the recognition gained for implementing a relatively 'low level' environmental management system, without the costs incurred for ISO 14001 (Groundwork Wales, n.d.).

2.6.2 British Standards Institute: BS8555

The British Standards Institute was founded in 1901 as the world's first national standards body, but which now operates globally as a business services organisation. The British Standard BS8555 "Guide to the phased implementation of an environmental management system including the use of environmental performance evaluation" was published in April 2003 and builds on ISO 14001 and the EU Eco-Management and Audit Scheme (EMAS). It is designed particularly for small and medium sized businesses and outlines the implementation process of a generic environmental management system over six separate phases, giving recognition to the completion of each phase. Once the final sixth stage has been completed organisations can go on to prepare for ISO 14001 or EMAS certification (BSI Group UK, n.d.). The British Standard is integral to the Institute of Environmental Management and Assessment (IEMA) Acorn Scheme described below.

2.6.3 The Institute of Environmental Management and Assessment Acorn Scheme

The Institute of Environmental Management and Assessment (IEMA) operates the accredited Acorn Scheme, a recognised environmental management standard, which allows organisations of all sizes to implement a phased environmental management system in accordance with the British Standard BS8555. The Scheme focuses on environmental improvements that are linked to business competitiveness and is flexible enough to allow all types of organisation to participate. After the implementation of one or more phases of BS8555 an inspection is carried out by an independently accredited Acorn Inspection Body to ensure all of the requirements have been met. The organisation will then be awarded a certificate and be placed

onto the Acorn Register, showing which phase of BS8555 has been met (Institute of Environmental Management and Assessment, n.d.). The Acorn Scheme is similar to the Green Dragon Scheme in that recognition is given for each phase of the environmental management system, providing 'quick wins', unlike ISO 14001 and the EU Eco-Management and Audit Scheme where recognition is gained only when the whole environmental management system process is finished.

2.7 Summary

Building on the discussion of drivers for environmental management in Chapter One, this Chapter has provided an overview of the pertinent UK legislation which acts as an external driver for universities in Wales to implement environmental management measures with a full discussion of the concepts of environmental management and environmental management systems. This Chapter has also provided a review of the international and UK standards for environmental management systems which are available to universities in Wales and which in themselves act as drivers for implementation. Table 2.2 below provides a summary of the facilitating organisations and standards as discussed in this Chapter.

Table 2.2 Summary of Facilitating Organisations and Standards

Description	Summary
The Higher Education Funding Council for Wales	Funded by the Welsh Assembly Government. Purpose is to distribute public funding for education and research at the higher education institutions in Wales.
The Carbon Trust	UK Government body which offers products and services to organisations in the private and public sector to help reduce their carbon emissions.
The Environmental Association for Universities and Colleges	The environmental and sustainability champion within higher education in the UK.
People and Planet Organisation	A nationwide student campaigning organisation focusing on world poverty, human rights and the environment.
Higher Education Environmental Performance Improvement	The project has supported operational improvement in areas such as buildings, energy and water efficiency, environmental management systems, transport and waste.
South West Wales Higher Education Partnership	A collaboration between three Welsh higher education institutions.
International Organisation for Standardisation: ISO 14000	A series of international standards concerned with environmental management.
European Union Eco-Management and Audit Scheme	A voluntary initiative designed to improve an organisation's environmental performance.
Green Dragon Environmental Standard	Suitable for both small and large organisations and recognition can be gained without gaining the formal ISO 14001 certification.
British Standards Institute: BS8555	Designed for small and medium sized businesses and outlines the implementation process of a generic environmental management system over six separate phases.
The Institute of Environmental Management and Assessment Acorn Scheme	A recognised environmental management standard, which allows organisations of all sizes to implement a phased environmental management system in accordance with the British Standard BS8555.

Chapter 3: Literature Review

3.1 Introduction

Having introduced the concept of environmental management in Chapter Two, this Chapter reviews the management literature regarding the implementation and practice of environmental management initiatives within organisations and, in particular, universities. The first part of the review concentrates on the drivers, strategic leadership and management of environmental management initiatives within the literature. The Chapter begins with a discussion of the drivers; why universities are looking to environmental management. This is followed by a review of how this is achieved through strategic organisational change management. The final part of this section discusses environmental leadership and management, and the importance of communications for change processes. This review of the management literature is then followed by a discussion of the relationships between the theoretical concepts of power, identity, knowledge and resistance, leading to a review of the concepts of organisational cynicism and ambivalence towards organisational change. These theoretical concepts are shown to add to the challenges and complexities of managing change processes as highlighted in the management literature. The final section of the literature review highlights individual sensemaking in organisations which is seen as an essential process during change events to enable people to create meaning. Thus the management and theoretical literature reveals the many challenges faced by organisations in implementing environmental management initiatives. The role of leadership and change agents is revealed as paramount to the outcomes of the change processes by providing strategy and a communicated vision to members. The review also highlights the importance of management commitment to environmental management and the role of dialogic communications to avert

ambiguity and uncertainty. Given the complexity of change events, ambiguous and uncertain situations are said to lead to individual sensemaking which acts as a coping mechanism. The reduction of ambiguity and uncertainty through dialogic communication can also reduce the instances of organisational cynicism and ambivalent responses to change events. The review also reveals the importance of understanding individual sensemaking and how meaning is constructed, particularly within organisational change events.

The environmental management literature suggests that there is limited research with few behavioural studies conducted on environmental behaviour in large institutions (Marans and Edelstein, 2010). Studies on environmental management implementation and practice in universities tend to focus on the practicalities of implementation, including technical and audit issues (Noeke, 2000; Herremans and Allwright, 2000; Price, 2005; Sammalisto and Arvidsson, 2005), with a focus on best practices (Stephens and Graham, 2010). Other research focuses on prescriptive models to implement environmental management measures including the “Osnabruck model” (Viebahn, 2002) consisting of ten ‘building blocks’ of an environmental management system to implement in universities world-wide, whilst Barnes and Jerman (2002) provide an overview of a multi-institution environmental management system geared specifically towards meeting the needs of higher education. The management literature review begins with a discussion of the drivers for environmental management, strategy and environmental leadership.

3.2 Drivers, Strategy and Environmental Leadership

3.2.1 Drivers for Environmental Management

The management literature reveals many reasons for a university to adopt environmental management initiatives. The legal requirements which act as drivers for universities in the UK have been discussed previously in chapter two (Price, 2005; Clarke and Kouri, 2009). Christmann (2000) points to the reduction in resource use and resultant cost savings whilst Comm and Mathaisel (2005) state that there is a strong argument for cost savings to drive environmental measures. With universities looking for ways to remain competitive in a global higher education market (Comm and Mathaisel, 2005) there is a possibility of attracting students through environmental management initiatives (Spellerberg *et al.* 2004; Sammilisto and Brorson, 2008). Studer *et al.* (2006) highlight the reputational gain from the addition of an environmentally responsible image. Other internal drivers include the commitment of management and responsibility for the environment (Christmann, 2000; Price, 2005; Clarke and Kouri, 2009). However, in the first instance, the main drivers are shown to include cost savings, regulations, due diligence and reduced liability (Clarke and Kouri, 2009). Regarding cost savings, Dahle and Neumayer (2001) conclude that "...only greening initiatives that involve quick financial payback are prioritised" (p. 148) with longer-term initiatives being disregarded. But with universities aiming to become more competitive, reduced costs could lead to higher operating margins enabling an improved service for a lower outlay (Comm and Mathaisel, 2005). Yet even small changes made to ways of working can make a difference to the environmental impact, and which can also lead to cost savings. These low or no-cost options, the 'low hanging fruits' (Kurzinger, 2004:246), can

help to motivate organisations to pursue longer-term measures which might accrue considerable financial savings and further reduce environmental impact.

3.2.2 Strategy and Change Management

With the drivers for environmental management within universities established, it is necessary to discuss strategy and the concept of change management. Much of the debate within the literature concentrates on how to implement effective change, given that it is claimed that over 60% of change efforts fail (Burnes, 2004; Higgs and Rowland, 2005; Beer and Nohria, 2000). The importance of effective change implementation is highlighted by Real and Poole (2005, cited in Lewis, 2007) in that “...without implementation, the most brilliant and potentially far-reaching innovation remains just that—potential” (p. 64).

The drivers discussed above reveal there is a growing need for organisations to learn to incorporate environmental values into their decision making (Halme, 2002; Post and Altman, 1994). For this to take place, a significant amount of change is required in most organisations which necessitates the use of change management techniques, as with any other corporate management initiatives (Callinan, in Sroufe and Sarkis, 2007:223). Halme (2002) points to the need to look towards cultural change and developing an environmental culture through organisational change and learning. However, environmental management systems are designed to implement specific initiatives and not for dealing with humanistic or cultural issues, hence the need to look to organisational theory. Tornatzky and Johnson (1982) define the implementation of change as being “...the translation of any tool or technique, process, or method of doing, from knowledge to practice” (1982:193, cited in Lewis, 2007), whilst Diefenbach (2007:127) proposes that change is about changing

processes, structures and routines, but even more importantly it is about changing how people think and act. Burnes (2004) proposes to avoid seeking a 'one best way' (p. 886) but rather to seek a change approach which is best suited to the organisation. Higgs and Rowland (2005) characterise two conflicting approaches to change in the literature as being a complex, unpredictable phenomena or a uniform, predictable process (p. 126), which are reflected by Burnes (2004) who proposes that the two dominant approaches are planned and emergent. The uniform approach first originated in Lewin's, 1951, planned approach (cited in By, 2007), yet due to its simplistic view of uniform implementation, the planned change model is seen as unsuitable for the fast-moving business environment of today (Higgs and Rowland, 2005). With a more complex view to change, the emergent change strategy of Pettigrew and Whipp (1991) and Dawson (1994, cited in Dawson, 2003:22), became a more popular view with organisations needing to be flexible in their approach as change cannot always be planned (Bamford and Forrester, 2003; By, 2005). In an emergent approach, change is initiated bottom-up and is seen as a continuous, adaptation process (Dawson, 2003; Burns, 2004). However, Burnes (2009) now argues for the need to revert back to the Lewin planned approach to change which is said to emphasise an ethical basis and democratic participation, as ethical and socially-responsible behaviour are becoming more important in society. The planned and emergent strategies are said to complement each other (Burnes, 2004) and given the advantages and disadvantages to both, there are benefits to combining planned and emergent change approaches (Biedenbach and Soderholm, 2008). Clarke and Kouri (2009) advocate a simultaneous top-down and bottom-up approach, following Post and Altman (1992, in Welford, 1997:84) who proposed to combine the top-down and bottom-up approaches into a middle-up-down approach where members of

the organisation work together on a horizontal and vertical basis, enabling a cooperative relationship between top, middle and lower management. Top management provides the vision and direction for middle management to then create middle-range visions which are then developed by lower management. The middle management are said to create a bridge between the top management's overarching vision with this being put into practice by the lower management (Nonaka, 1994). More recently, By (2009) highlights the need to acknowledge that the purpose of change should always be to ensure continuous improvement for the benefit of all in the organisation. Whichever approach is taken, Spellerberg *et al.* (2004:125) warn against *ad hoc* environmental management arguing that this approach is inadequate, but that putting a policy into practice without the formal adoption of an environmental management system can be successful (2004:126). Added to this, Christensen *et al.* (2009) highlight the need to adopt formal procedures as mere good intentions are insufficient to create sustainable university practices. With regards to the process of change initiatives, Kanter *et al.* (1992, cited in Burnes, 2009) propose that leadership "...create a shared vision and a common direction" (p. 386) in order to execute change, whilst Kotter (1995) proposes that in order to transform the organisation there is a need to create a vision and to develop strategies in order to achieve the vision. Following on in the process of change, this vision and strategy should then be communicated throughout the organisation (Klarner *et al.*, 2008). Overall, those who lead are responsible for driving the change initiatives (Comm and Mathaisel, 2005).

3.2.3 Environmental Leadership and Management

The importance of leadership and the commitment from top management to implementing environmental management measures is prevalent in the management literature (Comm and Mathaisel, 2003 and 2005; Lozano, 2006; Price, 2005; Sammalisto and Brorson, 2008; Clarke and Kouri, 2009). Kotter (1982, cited in Pettigrew *et al.*, 2006) proposes that the essential role of leadership is to set the agenda for the organisation, a process which requires top management to take the 'strategic intent' (2006:197) of the organisation and break it down into 'bite-sized challenges' (*ibid.*). Leadership has become recognised as an important issue for organisations facing change and implementing initiatives (Higgs, 2009) as the behaviour of leaders during change has a profound effect on the outcome of the initiative (Dunphy *et al.*, 2007; Higgs and Rowland, 2005). Importantly, research also reveals the adverse impact of negative leadership on change implementation (Higgs, 2009). Organisations are said to need a transformational leader to initiate the process who will convince senior management of the need for the change initiative (Klarner *et al.*, 2008), acting as facilitators by influencing change, not by controlling it (Karp and Helga, 2008; Higgs and Rowland, 2005). In contrast to the transformational, facilitating, style others point to the autocratic leadership style which is characterised by coercion, assuming more direction and control (Carnall, 2003; Angus-Leppan *et al.*, 2010b). However, Angus-Leppan *et al.* (2010b) argue that autocratic leadership is less likely to develop strong internal culture for environmental management. Leadership needs to be strong with a clear vision, leading the change in ways of thinking (Alshuwaikhat and Abubakar, 2008; Comm and Mathaisel, 2005; Shriberg, 2003; Dahle and Neumayer, 2001), whilst rising to the 'challenge of being a change agent' (Sharp, 2002:142). The type of leadership

approach is important and that the "...message must strike a chord of approval to the target audience" (Price, 2005:175). The change champion needs to have both humanistic and social capital in that they must have charisma, be a risk taker and take ownership of the initiative (Chrusciel, 2008), whilst environmental champions are those individuals in the organisation whose top priorities are environmental issues. Environmental champions have the environmental knowledge and the skills to gain support for environmental initiatives through their personal beliefs and vision. Environmental leadership has been defined as "...the ability of an individual or group to guide positive change toward a vision of an environmental better future" (Berry and Gordon, 1993:3, cited in Egri and Herman, 2000:572). Environmental champions have the ability to influence others and to mobilise organisations to change by being guided by eco-centric values and are said to affect changes to organisational strategy through using a wide range of leadership skills and through being proactive to challenges (Egri and Herman, 2000; Andersson and Bateman, 2000). Another leadership skill is to encourage pockets of individual environmental activity (Shriberg, 2003). However, as Ramus and Steger (2000) point out, leaders need support within the organisation to be successful and if there is no support from other management or there is no corporate environmental vision, then there will be fewer environmental initiatives. Environmental champions can help to shape organisational culture and vision, but there needs to be openness and willingness to change which in turn comes from the culture of management and the culture within the organisation (Bansal, 2003). Sharp (2002:131) lists management support, effective coordination and face-to-face communication as some of the approaches required for successful campus initiatives and that

“...successful application of these approaches requires high competency in listening, communication, relationship building, vision development, responsiveness and continuous strategic adaptation” (2002:132).

Management literature highlights that environmental leadership relies on the support and commitment from management to implement initiatives (Fisher, 2003; Christmann, 2000; Lozano, 2006; Comm and Mathaisel, 2005), whilst the management within organisations face the difficult problem of how to incorporate environmental measures into their working practices. Porter and van der Linde (1995) advocate the need for a new mindset to embrace environmental management as it is argued that low levels of management skills and knowledge can lead to a poor understanding of strategies available for creating a competitive advantage from implementing environmental management measures (Simpson *et al.*, 2004). In addition, low levels of ‘eco-literacy’ (Revell and Rutherford, 2003:27) and a lack of expertise and understanding with regards to environmental issues have resulted in a reactive rather than a proactive approach. Sustained senior management support of environmental activities is revealed as crucial (Studer *et al.*, 2006) with the success of implementing environmental measures being strongly correlated with management values with respect to environmental responsibility (Hanson *et al.*, 2004). Within the management hierarchy, Dopson and Stewart (1990) highlight the role of middle management as they “...cope with conflicting expectations of those above and below them” (p. 3), whilst Balogun (2006) reveals middle managers as ‘change recipients’ (p. 29) and highlights their impact on change outcomes. Balogun (2006) argues that both intended and unintended outcomes of change events can result from the way in which middle managers interpret, and make sense of, management initiatives, whilst Balogun and Johnson (2004) suggest that it is crucial to understand change recipients’ reactions to change events. Of particular relevance

is the way in which middle managers shape change in the absence of input from senior management, so with this in mind, middle managers are seen as pivotal to implementing changes. One of the most influential factors determining environmental strategy, and therefore direction, is the attitude of top-level management to environmental issues (Su Yol and Seung-Kyu, 2007) and the need to guide management through change to enable the integration of practices with environmental considerations (le Pochat *et al.*, 2007).

3.3 Barriers and Obstacles to Environmental Management

Management literature relates to many more barriers and obstacles than drivers for implementing environmental management measures; Dunphy *et al.* (2007) note the “...extensive literature on resistance to change” (p. 306). The barriers to implementing environmental initiatives at universities include the reluctance of management and staff to change their behaviour, and the misconception by management that environmental initiatives are only a cost, disregarding the benefit that accrues in the future (Dahle and Neumayer, 2001; Comm and Mathaisel, 2003; Lozano, 2006). Three factors which have been shown to be preventing the implementation of environmental measures are a lack of financial resources, lack of environmental awareness and a non-environmental culture (Dahle and Neumayer, 2001). Other obstacles to progress which have been encountered include the complexity of university management structures, too few people with commitment and general apathy (Spellerberg *et al.*, 2004; Velazquez *et al.*, 2005), whilst Lozano (2006) notes “...conservatism or unwillingness to change” (p. 791) and that “change creates extra work in addition to the day-to-day activities” (2006:791) are particularly relevant for universities. In looking at situations which could prevent

sustainable initiatives from being implemented, Velazquez *et al.* (2005) point to the conservative structure of universities whilst Ferrer-Balas *et al.* (2009:p6) focus on the added complexity of management structures within Faculty and disciplinary divides, proposing that culture and structures are addressed simultaneously to provide deep lasting change. The lack of commitment from top management to implement initiatives can lead to resistance in adapting to initiatives, leading to lost impetus; a factor which emphasises the need to adopt formal obligations and procedures as good intentions are not enough to create changes (Christensen *et al.*, 2009; Evangelinos and Jones, 2009). Whilst leadership is paramount during change events, Dunphy *et al.* (2007) reveal that most individuals resist change when it is being imposed upon them, including senior executives (2007:306). Resistance to change is not, therefore, the sole domain of middle management and those lower in the organisational hierarchy.

3.4 The Role of Communications during Organisational Change

“Communication matters in the processes involved in implementing planned organizational change” (Lewis, 2007:176).

The increasing literature on communications reflects the important relationship between communication and organisational change. Communication is said to be an essential element within organisations, particularly with regards to change activities, and is key to gaining people’s involvement in the change process (Thomas *et al.*, 2009; Lewis, 2007 and 2000; Daly *et al.*, 2003; Kotter, 1995), with poor communication of change goals leading to a lack of responsiveness from organisational members (Frahm and Brown, 2007). The role of communications for environmental management within universities is highlighted by various authors

including Sharp (2002), Sammilisto and Brorson (2008), Comm and Mathaisel (2005) and Clarke and Kouri (2009). The effective implementation of planned changes is said to depend to a certain extent on the interactions of those within the organisation (Lewis, 2007), and that change in organisations constitutes the shifting of identities and relationships which is accomplished by communications (Karp and Helga, 2008). Elving (2005) states that "...communication is vital to the effective implementation of organisational change" (p. 129), whilst Allen *et al.* (2007) argue that organisational change is a communications challenge. Russ makes the important deduction that "Organizations do not change through automation. Rather, change is implemented and sustained through human communication" (2008:199).

Yet despite the importance of effective communications there remains a dearth of empirical research on the role of communication during organisational change (Elving, 2005; Johansson and Heide, 2008; Allen *et al.*, 2007). Early models of communications such as that devised by Shannon-Weaver (1949, cited in Waterhouse and Lewis, 2004:361) depict communication as a monologic, one-way transmission of information from the sender to the recipient. This is followed by the communication model devised by Eisenberg *et al.* (1999, cited in Waterhouse and Lewis, 2004:361) which reflects more modern change thinking. This model identifies that organisational change is moving towards a continuous, learning experience as opposed to being one single event and as such, Eisenberg *et al.* (1999) propose that organisational change is a continuous event which requires communication to be a two-way dialogue. Dialogue is considered to be one of the most ethical forms of communication enabling the emergence of trust and satisfaction between the parties concerned (Kent and Taylor, 2002:22). Effective internal communication during a

change process has been shown to positively affect organisational culture and contributes to the overall effectiveness of the change process resulting in increased commitment from staff (Nordvang *et al.*, 2009), whilst the development of trust between co-workers, supervisors and top management can form as a result from the complex relationship between openness and communications (Thomas *et al.*, 2009). Kotter (1995) proposes "...using every vehicle possible to communicate the new vision and strategy" (p. 61), whilst effective leaders are said to generate energy for action through conversation which affects an individuals' eagerness to act (DiVirgilio and Ludema, 2009). Daly *et al.* (2003) support the view that internal communication has a role to play in the successful implementation of change management initiatives, highlighting the relationship links between the two organisational issues of change and communications. The literature reveals that communication has been found to minimise uncertainty and to increase the involvement and commitment from individuals (Allen *et al.*, 2007; Lewis, 1999, cited in Lewis, 2007; Frahm and Brown, 2007), whilst Burnes (2009) proposes that by establishing a regular and effective communications process "...can significantly reduce people's levels of uncertainty" (p. 460) which in turn enables their willingness to become involved in change the process. Only a small part of the literature details the modes of communication. Kotter (1995) and Burnes (2009) advocate that organisations should consciously use the wide range of formal and informal methods available to them, whilst Larkin and Larkin (1994:87, in Lewis, Schmisser *et al.*, 2006) claim that "...informal, face-to-face, verbal (spoken) interactions..." (p. 123) are most effective. The use of technology, and in particular e-mail, for communications is now said to be common place within organisations (van den Hooff *et al.*, 2005; Minsky and Marin, 1999). However, Byron and

Baldrige (2007) point to the pitfalls of non-verbal communication yet despite such problems the use of e-mail remains prevalent, possibly due to its simplicity and low-cost. Toepler (2005, cited in Seshadri and Carstenson, 2007) highlights the issue as “A lack of effective communication, which generally leads to discord and conflict, is more likely in e-mail” (p. 78). Seshadri and Carstenson (2007) also acknowledge the use of e-mail technology to overcome barriers of location and time, but that technology in itself is not a panacea for communications. The literature supports the view that communications plays an important role during organisational change processes. Armenakis and Harris (2002) consider that some negative responses to change are “...caused by leaders’ oversight of the importance of communicating a consistent change message” (p. 169), whilst failed change efforts have resulted from insufficient communications and a lack of leader interpersonal skills (Salem, 2008).

The above discussion provides a review of the management literature concerning environmental management within organisations. I now discuss the theoretical concepts of power, identity, knowledge and resistance and the complexity of their relationships within organisations. This section of the review also highlights the increasing attention being paid to the construct of organisational cynicism and the effects of ambivalence towards change processes. Finally, I highlight the existence of ambiguity and uncertainty during change events and the role of individual sensemaking as a coping mechanism and a way to construct meaning.

3.5 The Role of Power and Identity within Organisations

The organisational literature reveals the contradictory conceptualisations of power and resistance highlighting the complex relationships between power, identity, knowledge and resistance (Clegg, 1989; Knights and Vurdubakis, 1994; Collinson, 1994; Fleming and Spicer, 2003; Karreman and Alvesson, 2009). Yet the meanings ascribed to power and resistance are not clear cut (Karreman and Alvesson, 2009) and due to the current nature of organisations, the relationship between power and resistance is becoming 'increasingly intertwined' (Fleming and Spicer, 2008:301).

Power is said to exist in many forms within organisations, being conceptualised as 'legitimate' or 'illegitimate' (Clegg, 1989; Hardy and Clegg, 2006; Karreman and Alvesson, 2009). Following the earlier writings of Marx and Weber in the 1960s and 1980s hierarchal power, as a mechanism of a span of control over labour, is described as being 'legitimate' where power in organisations is aligned with ownership and class structure. The contrasting view is that of 'illegitimate' power being exercised outside of the formal hierarchy, as power is not simply rooted in structural constraints; it is 'diffused' (Miller and Wilson, 2006:473; Clegg, 1989). Alternatively, power is described as a 'restraining force' (Karreman and Alvesson, 2009:1118) being understood as a force that makes people do the things others want them to do. This concept of 'power over' others is in contrast to that of 'power to' enable social agents to act in particular ways; power which is viewed as being more productive than restrictive (Karreman and Alvesson, 2009:1119, following the French philosopher Foucault, 1977). Yet control is never absolute due to the relationship between organisations and agencies; power relations always involve at least two agencies for one to hold power over another (Clegg, 1994:285). Clegg

(1989:193) highlights this relationship between the resources held by employees (skills, knowledge) against the resources that empower employers (such as the ownership of production). The control of the employer is said to be continually under threat due to the embodied agency by the labour power of employees.

Yet power does not exist *per se*; it is an integral part of social reality. Power is socially constructed from organisational members' self-formation; identity is embedded in social practices and emerges from on-going discourses (Knights and Vurdubakis, 1994; Weick, 1995; Hardy and Clegg, 2006; Brown *et al.* 2010). Organisations are therefore constituted of power relations between people; people with their own identities and subjectivities (Clegg, 1994). Through discursive practices actors continually shape their selves, their roles and the roles of others in the organisation (Alvesson and Sveningsson, 2008); these social practices and self-formation being continually in process (Jermier *et al.*, 1994) whilst enabling "...people to constitute themselves" (Brown *et al.*, 2010). In this respect power does not directly determine identity but it enables individuals to create networks of power through their ongoing interactions and relationships (Jermier *et al.*, 1994; Hardy and Clegg, 2006). Individuals' identities are an important aspect of the relationship of power and language within organisations as the nature of identity is dependent upon discursive practices (Clegg, 1989). Individuality is never seen as being fixed, thus identity is seen as "...contingent, provisional, achieved not given" (Clegg, 1989:151). As such identity is complex, being "...embedded in the webs of power that permeate social practices" (Hardy and Clegg, 2006:764) so that when an individual interacts with various groups or networks within an organisation, different identities become apparent (Alvesson, 2002:165).

3.6 Power, Knowledge and Resistance: Complex Relations

Individuals create their own networks of power through their ongoing interactions and discursive practices (Hardy and Clegg, 2006) and through this interaction, individuals create power through knowledge; power and knowledge therefore are 'intimately related' (Miller and Wilson, 2006:473). Knowledge and information are key aspects of power in organisations (Clegg, 1989) and along with expertise are seen as an important power resource. Flyvberg (1998, cited in Miller and Wilson, 2006) states that 'knowledge is power' (p.473) as those with knowledge are able to hold power over others, depending on how the knowledge is used within the power relationship (Collinson, 1994). Miller and Wilson (2006) argue that if knowledge is power then 'power is also knowledge' (p. 473) as power is said to shape the "...social construction of knowledge, defining what counts as knowledge" (*ibid.*). Power does not only arise through the ownership of physical resources, power derives from the knowledge and skills to perform tasks so that in this respect, power operates through knowledge (Hardy and Clegg, 2006:769).

Within the concept of power, Giddens (1976:110, cited in Clegg, 1979:71) highlights the relationship between power and action whereby actors have the capability to intervene in a course of events. Actors can resist in that they can either do something or refrain from doing something. As such, power and resistance exist in a relationship to each other resulting in there rarely being one without the other (Clegg, 1989:208) and, like power, resistance is socially constructed through interpretive practices (Knights and Vurdubakis, 1994). Any act of resistance requires some form of organisation; some form of conscious act as an individual or as a group (Clegg, 1994). However, like power, resistance is not clear cut; the meaning of resistance is

dependent on the perspective of power (Fleming and Spicer, 2008; Karreman and Alvesson, 2009). Where power is conceived as a restraining force, as ‘power over’ when people are forced into doing something, resistance is seen as direct opposition to power. Here resistant acts include such overt responses as sabotage or working to rule (Collinson, 1994). However, resistance in the literature has said to become more subtle and less conspicuous (Fleming and Spicer, 2003; Fleming, 2005), with this indirect resistance taking the form of cynicism, humour or foot-dragging (Fleming and Spicer, 2008). Here, cynicism is interpreted as a defence of self (Fleming and Spicer, 2003) as employees try to “...resist attempts to control their identities” (Fleming, 2005). Rhodes *et al.* (2007) highlight the subversive act of ‘dis-identification through cynicism’ (p. 91) as a means for individuals to hold on to their identities yet they act out their work tasks (Fleming and Spicer, 2003). In this way, power can work through dis-identification; power is not imposed on the thoughts or beliefs of individuals, only on their actions. Thus individuals retain their identities and internal beliefs whilst they act out their employers’ demands. Rhodes *et al.* (2007) highlight that cynical responses can be triggered by a “...resentment of one’s dependence, potentially complicated further by an unacknowledged wish to be the object of authority” (p. 92). Cynicism here is not a *response* to managerial power but a resentment of the individual’s lack of power over others (see Gabriel, 2005). This form of resistance has been highlighted as an example of ‘power to’ which is itself a form of power (Karreman and Alvesson, 2009). Where power is conceived as a productive force, resistance is understood as inherent in the exercise of power which is in contrast to opposition of a restrictive force. To overcome power, Collinson (1994) identifies two opposing strategies of resistance. Collinson defines ‘resistance through distance’ (1994:25) whereby actors try to avoid demands and to distance

themselves from authority, enforcing hierarchal control. Yet by deploying a strategy of 'resistance through persistence' (*ibid.*) employees force management to divulge information and become more accountable. Here actors use their knowledge of the organisation as power to use against it, highlighting that it is the *way* in which knowledge is used (and not the quantity of knowledge) which creates power within a relationship (1994:40). Through these resistance strategies Collinson (1994) highlights the important relationship between power and knowledge and illustrates the importance of the 'strategic manipulation' (p. 30) of knowledge and information, enforcing the view that power operates through knowledge (Hardy and Clegg, 2006).

The complex relationships between power, knowledge and resistance exist within universities. Universities are said to be characterised by diffused power, multiple goals with "...seemingly chaotic decision making processes and are frequently politicised in their workings" (Gioia and Chittipeddi, 1991:436). Given such characteristics, the power / knowledge relationship is more aligned with the 'illegitimate' informal power as defined by Clegg (1989), as opposed to the so-called 'legitimate' hierarchal control of the university employees as a labour force. With power relations moving from 'power over' to the more enabling 'power to', resistance in organisations is becoming more subtle and subversive (Fleming and Spicer, 2008; Hardy and Clegg, 2006). Fleming and Spicer (2008:302) propose that acts of resistance now include cynicism and irony as opposed to the overt resistance of labour as a refusal to perform tasks.

3.7 Organisational Cynicism and Ambivalence to Change Processes

Organisational cynicism: "...a pessimistic viewpoint about change efforts being successful because those responsible for making changes are blamed for being unmotivated, incompetent or both" (Wanous *et al.*, 2000:133).

Within change processes, Rubin *et al.*, 2009) point to the 'increased scholarly attention' (p. 680) paid to the construct of organisational cynicism over the last decade, highlighting the importance of the negative effects of dysfunctional attitudes for organisations (Avey *et al.*, 2008). Change processes within organisations are said to bring about increased levels of 'organisational change cynicism' (Brown and Cregan, 2008:667) amongst members. Organisational change is likely to engender cynicism (Dean *et al.*, 1998; Bedeian, 2007) causing feelings of frustration and disillusionment (Andersson and Bateman, 1997) along with negativity and decreased motivation towards change (Wanous *et al.*, 2000; Dean *et al.*, 1998). Organisational cynicism is defined as a 'critical appraisal' (Bedeian, 2007:11) of motives and actions and also as "...an evaluative judgement that stems from an individual's employment experiences" (Cole *et al.*, 2006:463). Dean *et al.* (1998) propose a belief that the employing organisation lacks integrity (p. 345) whilst Abraham (2000) goes further by referring to organisational cynicism as

"...a negative attitude towards one's employing organisation...The core belief is that principles of honesty, fairness and sincerity are sacrificed to further the self-interests of the leadership, leading to actions based on hidden motives and deception" (p. 269, cited in Brown and Cregan, 2008).

This review of the literature reveals the need for dialogue to reduce uncertainty within organisations (Weick *et al.*, 2005; Russ, 2008). The participation of members through dialogue is said to give a sense of control and therefore helps to reduce

uncertainty (Lewis *et al.*, 2007), whilst Rubin *et al.* (2009) highlight the central role of leadership as facilitating change through communication of the change vision. Thus the important role of dialogic communication is highlighted, being shown to be both necessary and effective for organisational change (Frahm and Brown, 2005; Daly *et al.*, 2003; Elving, 2005). It is important to note that both Bedeian (2007) and Yuxia and Daniels (2008) argue that organisational cynicism towards change processes is evident within higher education institutions; thus the above definitions of organisational cynicism and the role of dialogue are therefore relevant to the characteristics of change cynicism within universities.

This discussion of organisational cynicism highlights the complexity of individual responses towards change initiatives. Ambivalence towards a change issue, such as the implementation of environmental management initiatives, is said to occur when it is seen simultaneously as positive and negative benefit for the organisation and/or individual (Plambeck and Weber, 2010). Piderit (2000) argues that employees respond to changes with ambivalence when they experience conflicting cognitions and/or emotions towards change, for example, by seeing the need for change yet finding it difficult to accept. The data reveal multidimensional responses of cognition and emotion (Piderit, 2000:783) towards environmental management initiatives. Negative and supportive responses which occur concurrently are described as ambivalent (Piderit, 2000:787), whereby an individual may hold a positive cognitive view towards a proposal based on organisational business grounds which they find goes against their emotional, moral views.

Piderit (2000) and Randall and Procter (2008) describe ambivalence towards change as the variances within individual responses to change. An ambivalent response is said to involve a simultaneous negative and supportive view of change (Plambeck and Weber, 2010) or where a cognitive response is in contrast to an individual's emotional response to change (Piderit, 2000). Alternatively, Campbell (1965, cited in Weick, 2001) defines ambivalence towards opposing tendencies as "...the optimal compromise" (p. 376) so thereby blending knowledge and doubt about a situation. Although ambivalent evaluations of change events are said to affect strategic processes and outcomes (Plambeck and Weber, 2010:689), importantly Piderit (2000:792) highlights the prevalence of ambivalence within individuals' responses to change. Individual ambivalence towards change can manifest as resistance (Piderit, 2000) thus understanding the effects of ambivalence is important for the role of change leaders who shape organisational vision and outcomes (Plambeck and Weber, 2010). However, change leaders may choose to act positively to influence outcomes as "...increased buy-in emerges through minimising ambivalence towards change" (Moon, 2009:518). Thus the role of leadership to create a vision and to communicate effectively throughout the organisation can mitigate the occasions of ambiguity and uncertainty which lead to individual sensemaking, negating organisational cynicism and ambivalence to change processes.

3.8 The Phenomenon of Individual Sensemaking

"Sensemaking involves the ongoing retrospective development of plausible images that rationalize what people are doing" (Weick *et al.*, 2005:409).

Sensemaking is understood as a social process "...grounded in identity construction" (Weick, 1995:17) as actors seek to make sense of events in their individual ways

(Rhodes and Brown, 2005; Brown *et al.*, 2008). One of the central features of change events is to alter existing values and meanings for organisational members; actors, therefore, are required to shape and re-shape their own situated identities during organisational change (Alvesson and Sveningsson, 2008; Reissner, 2010). Balogun (2006) highlights the need to move away from the premise that change is “...something done to and placed on individuals” (p. 43); rather there is a need to acknowledge the role that change recipients play in creating and shaping outcomes, and the need for organisational members to make sense of the process for themselves (Gioia and Chittipeddi, 1991). Meaning is a socially constructed phenomenon based on the interpretation of information and events (Clarkson, 2007) and as such, actors ascribe meaning to on-going events “...defining and aligning their interests and themselves (identities) with others” (Alvesson and Sveningsson, 2008:28). Actors, therefore, make sense of past situations and events through meaning construction (Brown *et al.*, 2010). However, as interpretation by individuals is informed by their situation and their identity this can lead to discrepancies in their sensemaking (Balogun, 2006). Rhodes and Brown (2005) suggest the use of narrative (storytelling) as data for interrogating the process of sensemaking within organisations, as individuals’ stories are a “...means of interpreting and infusing events with meaning” (p. 170). Using the narrative perspective of sensemaking, stories are a means of interpreting events and to give meaning, with the identities of individuals being constituted through the process of narration (Rhodes and Brown, 2005; Brown *et al.*, 2008). With identities being adapted to changing circumstances, Reissner (2010) argues that the development of identity is best seen as a narrative in which a person tells and re-tells their stories of self. During organisational change it is revealed that people construct their own narratives about events that are

inconsistent with the official version of events (Rhodes, 2000). This suggests that meanings surrounding change events are not fixed but that "...people are reflexively engaged in developing their own interpretations of, and reactions to, change" (Rhodes and Brown, 2005:173). The result is that much sense within organisations is not shared, as individuals ascribe meaning to events by aligning their identities with their interpretations of past experiences. Through these retrospective social processes, actors develop new meaning and interpretations (Balogun and Johnson, 2004).

Change processes such as environmental management are said to produce high levels of ambiguity and uncertainty within organisations (Frahm and Brown, 2007), which can motivate individuals to engage in 'coping strategies' (Allen *et al.*, 2007:188) aimed at reducing these perceptions. When faced with uncertainty, individuals or groups are driven to 'seek information to reduce' (*ibid.*) and will try to assign meaning when trying to understand a new experience (Gioia *et al.*, 1994). Weick (1995) describes ambiguity and uncertainty as 'two types of sensemaking occasions' (p. 91), whereby faced with ambiguous or uncertain situations, individuals will invent plausible 'self-sealing logic' (1995:84) to make sense of a situation.

Sensemaking is alternately described by Taylor and Van Every (2000) as a "...way station on the road to a consensually constructed, coordinated system of action" (p. 275, cited in Weick *et al.*, 2005). Thus to deal with ambiguity and uncertainty within a situation, groups or individuals search for meaning (Weick *et al.*, 2005:419). It is argued that dialogic communications can minimise uncertainty and increase understanding of a change process (Kent and Taylor, 2002; Frahm and Brown, 2005;

Lewis *et al.*, 2007; Allen *et al.*, 2007; Russ, 2008). Whilst Weick *et al.* (2005) state that “Communication is a central component of sensemaking and organizing” (p. 413), others *do not* make this direct link between communication and sensemaking (Allen *et al.*, 2007; Russ, 2008; Lewis *et al.*, 2007). However, Frahm and Brown (2005) highlight that change communication is “...intrinsically related to the conditions for sensemaking” (p. 4) and that the process of dialogue allows for collective sensemaking and opportunities to clarify meaning, enabling alternative explanations to reduce ambiguity (*ibid.*).

Whilst Rhodes and Brown (2005) highlight the use of narratives as a means of “...interpreting and infusing events with meaning” (p. 170), Weick (1995) proposes sensemaking as a social, on-going, retrospective act which is “...driven by plausibility rather than accuracy” (p. 17). Thus sensemaking is about the “...interplay of action and interpretation” (Weick *et al.*, 2005:409) and as such is relevant to this research as a means to examine the organisational change process of environmental management implementation and practice. It is argued that the phenomenon of sensemaking has been neglected within organisational literature (Basu and Palazzo, 2008). However, recent studies focus on how employees make sense of the wider concept of corporate social responsibility within their organisations (van der Heijden *et al.*, 2010), whilst Angus-Leppan *et al.* (2010a) use a sensemaking approach to explore employee perceptions of corporate sustainability. Following Basu and Palazzo (2008), Angus-Leppan *et al.* (2010b) promote the use of sensemaking to help understand the causes of ambiguity surrounding corporate social responsibility within organisations. Basu and Palazzo (2008) argue that the institutional factors, such as the sensemaking process which might lead to Corporate Social

Responsibility activities, have been neglected. More recently, van der Heijden *et al.* (2010) focused on how employees make sense of Corporate Social Responsibility within their companies, whilst Angus-Leppan *et al.* (2010a) use a sensemaking approach to explore stakeholder perceptions of corporate sustainability. In addition, Angus-Leppan *et al.* (2010b, following Basu and Palazzo, 2008) promote the use of sensemaking theory to help understand the causes of ambiguity surrounding corporate social responsibility.

According to Weick (1995) and Weick *et al.* (2005) sensemaking takes place when individuals are no longer able to use their normal routines and need to create new meaning to explain and cope with their emergent reality. Weick *et al.* (2005) state that “sensemaking starts with chaos” (p. 411). People within organisations initiate sensemaking when they are confronted with implausible events, so-called ‘shocks’, which they need to make sense of for themselves (Weick, 1995; van der Heijden *et al.*, 2010) and to create a consistent set of understandings (Angus-Leppan *et al.*, 2010b). These ‘shocks’ are produced by the occasions of ambiguity and uncertainty which trigger sensemaking (Weick, 1995:91); ambiguity is said to refer to a lack of clarity resulting in confusion whilst uncertainty is described as ignorance which triggers sensemaking (Weick, 1995:95). This research suggests that ambiguity arises from the lack of clarity surrounding the piecemeal, *ad hoc*, implementation and practice of environmental management initiatives, whilst uncertainty leads to individual sensemaking because of the ignorance of some university members regarding these initiatives. The lack of communication and enforcement of initiatives within the universities creates an ambiguous situation, leading to confusion, whilst creating uncertainty for those members who are ignorant of the environmental

management initiatives. Balogun (2006) relates to the outcomes which result from the way that middle managers make sense of senior management initiatives, highlighting that change strategies are often formulated by senior management with middle managers playing a pivotal role in putting these plans into action. Middle managers are seen as recipients of change and it is crucial to understand their reactions to change. However, in the absence of input from senior management it is crucial to understand how these middle managers shape change through individual sensemaking and interpretive frameworks (Balogun and Johnson, 2004).

Weick (1995) proposes sensemaking to be a retrospective look at past events in order to provide plausible explanations for an ongoing event. Individuals 'filter, edit and re-sort experiences' (Brown *et al.*, 2008:1052) which in turn leads to disagreements in their explanations as individuals do not work towards an agreed outcome, but "...determine their own highly personal interpretations of what has occurred" (Brown *et al.*, 2008:1052). Hence much sense within organisations is not shared because of the individual differences in sensemaking, as Weick (1995) notes that people share a 'referent' common experience yet they can infer different meanings. However, Angus-Leppan *et al.* (2010a) propose that sensemaking is a way for people to reduce confusion, which leads on to the notion of the two common occasions within organisations which trigger sensemaking; those of ambiguity and uncertainty. Weick (1995) states that

"In the case of ambiguity, people engage in sensemaking because they are confused by too many interpretations, whereas in the case of uncertainty, they do so because they are ignorant of any interpretations" (p. 91).

Ambiguous situations are said to lack clarity and consistency, whereas uncertainty creates the reason for seeking meaning when a lack of knowledge exists (van der Heijden *et al.*, 2010). Ambiguity is found in all aspects of organisational activity, whether in changing and complex situations or non-routine tasks (Weick, 2001). Of the twelve sources of ambiguity to trigger sensemaking in changing situations, as identified by McCaskey (1982, cited in Weick, 2001:45), five are particularly relevant to this discussion of the data presented in this research:

Table 3:1 Extract from ‘Characteristics of ambiguous, changing situations’, McCaskey (1982, cited in Weick, 2001:45)

Characteristic	Description and Comments
Multiple, conflicting interpretations	For those data that do exist, players develop multiple, and sometimes conflicting, interpretations. The facts and their significance can be read several different ways.
Different value orientations, political / emotional clashes	Without objective criteria, players rely more on personal and/or professional values to make sense of the situation. The clash of different values often politically and emotionally charges the situation.
Goals are unclear, or multiple and conflicting	Managers do not enjoy the guidance of clearly defined, coherent goals. Either the goals are vague or they are clearly defined and contradictory.
Time, money or attention are lacking	A difficult situation is made chaotic by severe shortages of one or more of these items.
Success measures are lacking	People are unsure what success in resolving the situation would mean and/or they have no way of assessing the degree to which they have been successful.

Weick (1995:92) proposes that ambiguity may appear in organisations in many different ways and trigger sensemaking, as shown in the table above, where 'characteristics' denote a possible situation within an organisation whilst the 'description' applies an understanding and reasoning for the situation to occur. With ambiguity being prevalent in organisational life, Angus-Leppan *et al.* (2010b) propose that it is the retrospective process used in sensemaking which reduces ambiguity and addresses uncertainty. According to van der Heijden *et al.* (2010:9), to reduce their uncertainty individuals need formal information to help them determine possible outcomes of activity, whilst to reduce ambiguity, individual members require different forms of information consisting of personal contacts and direct contact leadership to enable them to reduce confusion. Sensemaking is therefore relevant to this research as the retrospective processes of university members reveals their ambiguity and uncertainty of the environmental management processes.

3.9 Summary

This review of the literature has revealed the complexities facing universities in implementing change initiatives such as environmental management. The review highlighted the drivers for environmental management and the importance of environmental leadership to create a strategy and vision for the future. Communication is also shown to play an important role during change events. In the second part of the review I have discussed the theoretical concepts of power, identity, knowledge and resistance within organisations, highlighting the important relationship between these concepts. This discussion has led on to the concepts of organisational cynicism and ambivalence towards change processes. I have then

introduced the phenomenon of individual sensemaking initiated by organisational members to reduce situations of ambiguity and uncertainty during change events.

The following Chapter discusses the interpretative research methodology of the thesis, highlighting the case study strategy and the qualitative research approach whilst documenting the approach to gathering qualitative data through semi-structured interviews and drawings.

Chapter 4: Research Methodology ~ an Interpretive Reading

4.1 Introduction

The overall purpose of this research is to investigate individual sensemaking of the implementation and practice of environmental management initiatives in Welsh universities. My objective was to add to the existing debate on individual sensemaking within universities through the exploration of environmental management implementation and practice within universities, whilst adding to the literature on individual sensemaking by contributing empirically. This thesis also contributes to the use of visual methods as a means of collecting different data.

Mason (2002:30) outlines the methodological strategy as the ‘logic’ which underpins the research design and by which the researcher aims to answer the research question. As such my methodology follows the interpretive framework, proposed by Denzin and Lincoln (2008), which has guided the design and completion of my research. The choice of methodology and research methods are said to be shaped by research aims and epistemological concerns whilst being influenced by organisational, political and personal factors (Buchanan and Bryman, 2009). This choice of method frames how data phenomena are observed which underpins the interpretive approach to studying organisations, focusing on “...processes of sensemaking and the role of intersubjectivity, lived experience and prior knowledge” (Yanow and Ybema, 2009:40). Yanow and Ybema (*ibid.*) propose that interpretive analysis “...asks after multiple, and potentially conflicting, meanings made or held by different ...communities using and interpreting the same artefacts” (p. 40), Buchanan and Bryman (2009) state that an interpretative discourse “...regards sensemaking individuals as engaged participants, as co-creators of social

structures...to establish local meanings” (2009:3). In this research I was interested in the ways that individuals make sense of the ambiguities surrounding the implementation and practice of environmental management initiatives at universities.

This Chapter begins by discussing the interpretivist methodological approach and the case study research strategy adopted. I then delineate the qualitative research methods of data generation through face-to-face interviews and drawings. In the final section the processes of data analysis and representation are outlined which have enabled the researcher to focus on the ‘hows’ and ‘whats’ of social reality.

4.2 The Research Approach

“All research is interpretive; it is guided by the researcher’s set of beliefs and feelings about the world and how it should be understood and studied” (Denzin and Lincoln, 2008:31).

The fundamental argument being conducted between qualitative researchers with opposing perspectives is that of ‘should the social world be studied in the same way as the natural sciences?’ (Mason, 2002:15; Kvale, 1996:66). Whilst this argument is not intended to be settled here, Mason (2002) and Denzin and Lincoln (2005) point to the importance for any qualitative researcher to impose their ontological and epistemological positions in order to focus their research strategy. Mason (2002:15) highlights the ontological properties of social processes, interpretations, social relations and social practices as being particularly well matched to qualitative research, whilst the epistemological relationship “...between the inquirer and the known” (Denzin and Lincoln, 2008:31) is said to guide the researcher’s actions. These beliefs are said to “...shape how the qualitative researcher sees the world and acts in it” (*ibid.*). This in turn gives rise to the epistemological concerns of positivist

versus interpretivist paradigms. Miles and Huberman propose that the positivist view takes "...theoretical propositions according to the rules of formal logic" (1994:5) whereas interpretivism implies a subjective view, providing deeper understanding and an interpretation of meanings by the researcher (Miles and Huberman, 1994:8). However, the differences between research paradigms are becoming less denoted and less clear as the "...lines between epistemologies have become blurred" after Miles and Huberman, (1994:5). Buchanan and Bryman clarify the interpretative (constructivist-phenomenological) position as regarding the sensemaking individuals in organisations as "...engaged participants, as co-creators of social structures" (2009:3), whilst Yanow and Ybema propose that phenomenology underpins the interpretive approach to studying organisations through its focus on "...accounting for processes of sensemaking" with interpretive research methods seeking to "...track the processes through which meanings are created" (2009:40). In this regard this thesis leans towards an interpretive paradigm (Denzin and Lincoln, 2005:22). To explore this further Mason (2002:56) goes on to distinguish the interpretive approach as one where the researcher sees people, their interpretations, meanings and understandings as the primary data sources and one which aims to explore people's individual and collective understandings, reasoning processes and social norms. This approach is confirmed by Blaikie as follows:

"Interpretivists are concerned with understanding the social world people have produced and which they reproduce through their continuing activities. This everyday reality consists of the meanings and interpretations given by the social actors to their actions, other people's actions, social situations...In short, in order to negotiate their way around their world and make sense of it, social actors have to interpret their activities together, and it is these meanings, embedded in language, that constitute their social reality" (2000:115, in Mason, 2002:56).

As such, the interpretive approach seeks the ‘insider view’ (Mason, *ibid.*) for what people say about or what constitutes their individual and collective meanings. Interpretive practice combines the ‘hows’ and ‘whats’ of social reality, being centred in how people methodically construct their experiences and in the workings of institutional life which inform and shape their ‘reality-constituting activity’ (Holstein and Gubrium, 2005:483). Given that the research question is to investigate individual sensemaking of university members regarding the implementation and practice of environmental initiatives, then my position is that of an interpretivist, giving way to a qualitative approach to the research. Denzin and Lincoln (2008) point to the implied ethical-moral stance of the researcher to denote epistemology; the basic set of beliefs and the approach taken in experiencing the world. Through the interpretivist paradigm the research here aims to create findings from individual accounts. The epistemological approach influences the nature of the research interviews, with semi-structured interviews allowing access to the interviewee’s understanding and views (Cassell, 2009:505). Given the emphasis on an interpretive approach Silverman proposes that methods used by qualitative researchers demonstrate they can provide a “deeper understanding of social phenomena” (2001:32) than would be obtained through quantitative data, yet he points out that there is “no agreed doctrine” (*ibid.*) underlying qualitative research. Instead, Hammersley (1992:160-172, in Silverman, 2001:38) proposes a ‘set of preferences’ shared by qualitative researchers which include a preference for the analysis of words and images rather than numbers, a preference for naturally occurring data and a preference for meanings by attempting to “...document the world from the point of view of people studied”. In addition to this orientation, Miles and Huberman (1994) propose a feature of qualitative research as where the researcher aims to capture data on the views of local actors ‘from the

inside' (1994:5). This in turn leads to the discussion on interpretive readings of data through constructing a version of what the data mean or infer (Mason 2002:149). This approach is in line with that described by Mason who describes the interpretive reading of the data as "constructing a version" (2002:149) of what the researcher thinks the data mean or represent, or inferences from the data. This research follows Hammersley (1992) and Miles and Huberman (1994) as data are constructed from the interpretation of words and images of individuals within universities.

4.3 Case Study Strategy

Yin defines a case study as an empirical inquiry which

“...investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (1994:23).

Given that the aim of the research is to gain insight into how environmental management manifests in a number of Welsh universities the research approach took the form of a multiple-case study (Yin, 1994:44); the evidence from multiple case studies is often considered more compelling and the overall study is regarded as more robust. Having ascertained the qualitative approach, this raises the question of how to conduct the research. Although Yin (1994) reveals a positivist leaning through social science research strategies including experiments, surveys, histories and analysis of archival information, he proposes the use of case studies within the interpretivist paradigm as follows:

“...case studies are the preferred strategy when “how” or “why” questions are posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context” (Yin, 1994:1).

A case study strategy for my research was chosen based on the above statement from Yin in that behavioural events are documented, not controlled, with the dominance of 'how' and 'why' questions. Eisenhardt proposes the application of between four and ten cases, stating that with fewer than four cases it is "...often difficult to generate theory with much complexity..." whilst with more than ten cases it "...quickly becomes difficult to cope with the complexity and volume of the data" (1989:545). With this in mind my research approach employed four cases, chosen on the basis of their physical location within South Wales and on the basis that they are at different stages of environmental management implementation. The cases of Cardiff, Swansea, Glamorgan and Swansea Metropolitan Universities are discussed in detail in Chapter Five.

4.4 Qualitative Interviewing

Cassell states that interviewing is "...perhaps the most ubiquitous of all data collection techniques" (2009:500) whilst Atkinson and Silverman (1997:304) highlight the attraction of interviews for both qualitative and quantitative researchers. Within organisational research, interviews have been widely used since the 1980s with qualitative interviews being regarded as a "progressive dialogical form of research" as opposed to the "positivist quantification of questionnaires" (Kvale, 2006:481). However, Mason (2002:39) proposes that the researcher has to confirm their reasoning for using qualitative interviews, asking the questions as to why they would want to interview people to generate data and why use qualitative interviewing rather than a more structured questionnaire; the answers to this being closely related to the research question posed. Interviews should be seen as an essential source of case study data as most case studies concern human affairs, which

should be reported and interpreted through the eyes of the interviewees (Yin, 1994:85) and similarly Kvale (1996:p14) states that qualitative research interviewing "...is a construction site for knowledge, an inter-change of views between two persons conversing about a theme of mutual interest". However, the following reasoning affirms my decision to conduct the research through qualitative interviews as opposed to questionnaires:

"...as long as many researchers continue to treat respondents as unimportant, faceless individuals whose only contribution is to fill one more boxed response, the answers we, as researchers will get will be commensurable with the questions we ask and with the way we ask them.... The question must be asked person-to-person if we want it to be answered fully" (Fontana and Frey, in Denzin and Lincoln, 2005:722).

Conducting qualitative research interviews is deemed appropriate when studying individual perceptions of processes within an organisation (King, 1994, in Robson, 2002) and is typically divided into three types: fully structured, semi-structured and unstructured (Mason, 2002).

Based on the epistemology of this research the decision was taken to conduct semi-structured interviews, with open-ended questions on a one-to-one basis, as this method would enable the researcher to gain the data being sought from the respondents. A total of fourteen questions were put to each interviewee. Open-ended questions allowed the interviewees to say as much as they could or wanted to, whilst the semi-structured technique allowed the researcher to 'keep to the script' and enable analysis of the data at a later stage (following King, 1994, cited in Robson, 2002).

4.4.1 Gaining Access to the Interviewees

Before the detailed discussion on data collection, it is important to note the ethical concerns surrounding interviewing. Fontana and Frey point out that ‘extreme care’ must be taken to prevent any harm coming to interviewees, whilst going on to promote the three ethical concerns of ‘informed consent’, ‘right to privacy’ and ‘protection from harm’(in Denzin and Lincoln, 2005:715). For the purpose of this research the School of Business and Economics Ethics Form was signed by the researcher and supervisors prior to starting the interviews. To protect interviewees and to provide ethical research, Silverman proposes that people participate voluntarily, their comments remain confidential and that people are protected from harm (2006:323). All data generated in this research, during the interview and the drawings, are included in the discussion on ethical concerns.

For the purpose of this research an e-mail invitation was sent to each prospective interviewee which introduced the researcher and gave details and a brief overview of the research being conducted, providing ‘informed consent’ (Mason, 2002:118). In addition, Silverman points to the importance of protecting the identities, even where the research does not appear to be “... particularly delicate or intimate” (2006:320). The researcher confirmed to all interviewees that their comments would remain confidential and all interviewees have been given a pseudonym where their data has been published in this thesis. To arrange the interviews, a selection of dates was given to allow for full diaries, but this possibly held up the process of arranging interviews as time was given to each prospective interviewee to respond. If there had not been a response after a week or so, either a reminder e-mail was sent or a direct phone call was made to ask for a response. For the convenience of the interviewees,

all of the interviews (bar one) were held at the university where the interviewee is based. At the beginning of each interview the background to the research was confirmed so that the interviewee was clear as to the topic they were going to be asked about. Each was told how many questions there were in total and that these were the same generic questions used in each interview. It was also clarified that these were open-ended questions, that there were no 'right or wrong' answers and that if the interviewee had no information to offer or was unable to answer the question, then they were free to say 'no' or 'don't know'. In order to retain as much data as possible all of the interviews were recorded and notes were taken during the interviews in addition. However, Mason points to transcriptions being only 'partial' (2002:77) in that non-verbal aspects are not recorded. The researcher found that whilst recording the interviews it was easier to listen to and engage with the interviewee, confirming Mason who warns against the reliance on recordings which stop the interviewer interacting with the interviewee (2002:77). Whilst it is not possible to guard against every eventuality (Silverman, 2006), researchers are responsible to their participants. In all instances "...the most important ethical imperative is to tell the truth" (Johnson, 2002, cited in Mason, 2002:116).

4.5 Data Sources and Methods of Data Collection

An important feature of qualitative data is that it is said to focus on "...naturally occurring, ordinary events in natural settings, so that we have a strong handle on what real life is like" (Miles and Huberman, 1994:10). The choice of methods employed to collect qualitative data is linked to the research aims as well as organisational, political and personal considerations (Buchanan and Bryman, 2009). Mason (2002) uses the term 'generating' data rather than 'collecting' data and also

makes an important distinction between data sources and the methods for generating data from the sources. Here the researcher is “...actively constructing knowledge...and using certain methods derived from their epistemological position” (Mason, 2002:52). Yin proposes that researchers are ‘collecting evidence’ (1994:78) whilst conducting their case studies. This ‘evidence’ can take the form of documents, archival records, interviews, direct observation, participant-observation and physical artefacts (Yin, 1994:78). Similarly, Mason proposes that data sources can include, but are not restricted to, people (their experiences, opinions, views, thoughts, ideas, morals and actions), visual images and diagrams, texts, publications, documents, laws, regulations and policies (2002:52). In line with the interpretive methodology and qualitative approach, the table below provides an outline of the sources of data and methods of data generation used in the research.

Table 4.1: Qualitative Data Sources, Data and Methods

Data Sources	Data	Methods
People	Views, behaviours, practices, morals, opinions	Face to Face Interviews and Drawings
Organisation (‘unofficial’ stance)	Culture	Interviews and Drawings
Organisation (‘official’ stance)	Environmental strategy; Environmental policies; ‘Rules’	University documentation and website

(Adapted from Mason, 2002:28)

The use of multiple sources of data in case studies can allow researchers to investigate a broader range of historical, attitudinal and behavioural issues leading to a process of triangulation by corroborating the evidence and enhancing the rigour of

the research (Mason, 2002:33; Robson, 2002:174; Yin, 1994:92). Triangulation can help to reduce the threats to validity, but it can also open up discrepancies and disagreements between the different sources (Robson, 2002:175). Mason (2002:190) also argues that different methods and data sources are likely to provide different versions of events. The view taken here is that the method of triangulation alone will not result in a consensus leading to a convergence of ideas, but by collating data from multiple sources such as interviews, drawings and official documentation this enhances the validity of the data and enables a more rounded interpretation.

4.5.1 Documentation and Official Data

For the purpose of validity, Silverman proposes the comparison of different kinds of data known as ‘triangulation’ (2006:290) to verify interpretation and which Stake advocates as the process of using “...multiple perceptions to clarify meaning” (2005:454). Documentary information is likely to be relevant to every case study topic (Yin, 1994:81) and can take many forms. All of the universities in this study include a great deal of their environmental information and documentation on their external websites which are available to the general public, including their Environmental Policy. However, Cardiff and Glamorgan Universities kindly provided additional documentation to aid in the interview process and for general information.

The following sections describe the process for the generation of data through face-to-face interviews and drawings.

4.6 Data Generation through Semi-structured Interviews

The objective of conducting the interviews was to gain the individuals' views and understanding of environmental management initiatives at their university. The focus of the interviews resulted from the initial literature review which had given an insight into the challenges of instigating such initiatives. Interviews commenced in October 2008 at Swansea University, with interviews at the remaining universities starting in May 2009. The start date for these interviews was delayed due to difficulties in gaining access to prospective interviewees, with the final interviews being completed in November 2009.

In order to gain a reasonable coverage for analysis an overall target of around fifty to sixty interviews was expected. Given that access to interviewees would be easier at the researcher's own university of study, the majority were undertaken there in order to give a solid grounding of views from one institution. Therefore, it was expected that there would be fewer interviews undertaken at the remaining three universities. However, the number of interviews carried out was dependent on access to and agreement of a suitable number of interviewees in the case study universities. Kvale (1996:103) proposes the view that the quality of interviews (i.e. time taken for preparation and analysis) should outweigh the sheer number of interviews undertaken.

Interviewee sampling and selection provide a strategic focus for data generation which Mason believes to be 'vitally important' (2002:120) for rigorous qualitative research. At the outset of this research the target number of interviews required at Swansea University was in the region of twenty-five to thirty whilst at the remaining

three universities it was envisaged that six to ten interviews would be required at each one in order to provide a relevant range and reasonable sample size for analysis.

Table 4.2: Sample of interviews completed

University	Academics	Non-Academic Staff	Students	Total
Cardiff	2	5	2	9
Swansea	10	14	4	28
Glamorgan	3	4	2	9
Swansea Metropolitan	5	2	4	11
Totals	20	25	12	57

The above sample consists of 33 male and 24 female interviewees ranging from middle-manager to lower level posts for academics and other staff, selected to cover as wide a range as possible but not at senior management level. A small number of students were also interviewed to provide a comparison to staff member responses. It was expected that this sample would provide useful and meaningful data for analysis (Mason, 2002). The sample includes both those who have direct contact with environmental management and those who do not. Senior management were not included in this sample as the research objective was to discover the ‘unofficial’ views whereas it was felt that senior management would provide the ‘official’ stance.

Despite a small number of refusals, it was possible to gain a diverse coverage of many of the Faculties and administrative functions throughout Swansea University. Access to interviewees at the other three universities was not so easy and relied on only one or two direct contacts, then relying on internal help with gaining more contacts. It was therefore not possible to gain as comprehensive coverage as at

Swansea University. There were also many more refusals at these universities than at Swansea University which was put down to the fact that with busy schedules, staff and academics would have their own students' research to accommodate. To capture the full essence of what the interviewee had said, the recorded interviews were transcribed immediately after the interview as this was regarded as the most efficient process. Bishop (2008) proposes that what is said should be unaltered, so that in all transcripts short pauses were included with 'um...' or 'well...' and responses were denoted with exclamation marks where appropriate. This tactic enabled the collection of 'rich' data for later analysis, by gathering as much information as possible on not only what was said but *how* it was said. Each interview comprised 14 questions being posed to each interviewee to gain their knowledge and understanding of environmental management initiatives. The focus of the questions ranged from how initiatives were started through to the impact on their work roles and daily routines within the university. The themes of the questions were led by the initial environmental management literature review, covering the instigation of environmental management; vision and strategy from the university leadership; communication of initiatives; the practice of procedures and routines and the problems encountered. The focus of the questions links to the overall research question through interrogating the implementation and practice of environmental management initiatives.

Interviews can be used as the primary or sole approach to a study, but they lend themselves to be used in conjunction with other methods (Robson, 2002:270). The semi-structured interview has predetermined questions but can be flexible in the order the questions are asked whilst the interviewer can modify the questions and

give prompts, depending on what seems most appropriate. Face-to-face interviews allow for flexibility by modifying questions, adding prompts where necessary and investigating further into responses where questionnaires and surveys cannot. Part of the skill of the interviewer is knowing how to be flexible and being able to probe for further information (Robson, 2002), whilst Buchanan and Bryman (2009) point to the interpersonal skills of the interviewer which enable the data gathering process. However, this flexible approach raises concerns about the lack of standardisation and possible bias in the responses (Bryman and Bell, 2007). There are weaknesses to all data gathering techniques but as Yin (1994:80) highlights the common problems of bias due to poorly constructed questions, response bias, poor recall and poor or inaccurate articulation regarding interviews. It is important to note the criticism of qualitative research of subjectivity, relying on the integrity of the researcher and their interpretation of the information they collect. Kvale (1996:64) notes that it is often claimed that qualitative research interviews lack objectivity due to the focus on human interaction.

4.6.1 Sensemaking in the Interviews

The interview questions provided an opportunity to gain insight into the individual's understanding of the environmental management processes by exploring sensemaking. At the start of the interviews, the researcher was seeking clarity of understanding and awareness of the processes to implement environmental management initiatives. The posing of these interview questions (see Appendix A) provided the opportunity for sensemaking as individuals were asked to recall their experiences and to provide a retrospective explanation of their understanding. The fourteen interview questions cover a range of aspects from the management literature

with regards to change management processes to implement environmental management as they relate to individual experience. The interview questions were selected to enable the researcher to discover how aware the individuals were of the environmental management, from its inception through to becoming engaged through communication from university leadership (Elving, 2005; Lewis, 2007). This line of questioning enabled individuals to confront their ambiguity or uncertainty of environmental management; both of which are occasions to trigger sensemaking (Weick, 1995). This aspect was important to the research to enable further understanding of managing environmental management change within universities and to reveal implications of this for university leadership. The interview questions invited individuals to retrospectively interrogate their experiences and to make sense of what had occurred.

The basic interview questions were asked of each individual irrespective of their knowledge and understanding of environmental management. As expected, because of the semi-structured nature of the interviews, individuals provided more or less insight than others. In order to enhance data collection, supplementary questions were also asked to provide the researcher with further detail surrounding individual sensemaking such as 'Does the individual feel engaged with the environmental management process?' and 'Was there a clear environmental vision from university leadership?' The semi-structured format allowed the researcher to connect with each individual and to provide an 'inter-change of views' (Kvale, 1996), probing for additional data through individual sensemaking. Examples of this included asking individuals for their thoughts and experiences of their University as being a 'learning organisation' and whether there was a culture of encouraging new ways of working.

This line of questioning opened up the discussion with the interviewee as to the impression of change processes being instigated and welcomed at each university.

As such, the interview process enabled interviewees to make sense of their experiences of environmental management in individual ways (Rhodes and Brown, 2005; Brown *et al.*, 2008). Change events are said to alter existing values and meanings for organisational members whereby individuals are required to re-shape their identities; effecting change recipients to play a role in shaping change outcomes (Balogun, 2006). Thus meaning is socially constructed based on the interpretation of individual's experiences (Clarkson, 2007) as actors ascribe meaning (Alvesson and Sveningsson, 2008). During the semi-structured interviews, members made sense of past and on-going events through meaning construction (Brown *et al.*, 2010). This interpretation of experiences was informed by member's situations and identities, leading to discrepancies in sensemaking (Balogun, 2006). During organisational change events individuals construct their own narratives which are inconsistent with the official version (Rhodes, 2000); the result of which is that sensemaking of events is not shared as individuals ascribe meaning aligned to their identity and experiences (Balogun and Johnson, 2004). When faced with ambiguity or uncertainty individuals are motivated to engage in 'coping strategies' (Allen *et al.*, 2007:188) and are driven to assign meaning in trying to understand a new experience (Gioia *et al.*, 1994). Weick describes this as inventing 'self-sealing logic' (1995:84) to make sense of a situation.

4.7 Visual Data

A less traditional method of collecting data on and in organisations is that of using images. This non-traditional method has been advocated to get at “...the more unconscious or less rational aspects of corporate culture” (Nossier and Biberman, 1990:13) and to ‘give voice’ (Barner, 2008:120) to emotional reactions to change events. When trying to understand a new experience or concept, individuals do so by trying to ascribe meaning to it; “...much of human understanding occurs through the use of symbolic processes” (Gioia *et al.*, 1994:364), with the use of metaphor helping organisational members to interpret and make sense of change events (Barner, 2008). Physical artefacts such as visual representations are said to have less potential relevance in most kinds of case study, but that when they are relevant, they can be an important component in the overall case research (Yin, 1994:90). Meyer (1991) also draws on other areas of study, such as psychology and neurophysiology, to urge organisational researchers to collect data in the form of pictures and diagrams, an approach which informed that taken by Vince and Broussine (1996). Kearney and Hyle (2004) propose that the use of drawings creates a path to the feelings and emotions of the respondent, yet Warren (2009:566), in line with Mason (2002:104), finds that visual research is underused within organisational research. Organisational life is “...rich with imagery and symbolism” (Warren, *ibid.*) which offers visual researchers great potential for data; meaning is effectively grasped through “...symbolic or metaphorical representation...thus symbols are basic to the process of sensemaking” (Gioia *et al.*, 1994:365). Metaphors are said to provide a vehicle for emotional expression; a facilitator to express conscious and unconscious experiences which “...cannot easily be described because of linguistic and grammatical constraints” (Barner, 2008:123). According to Warren there has been a steady growth

in the use of visual studies during the late 1990s and early 2000s with the move away from positivist to interpretivist models. There appear to be many advantages to be gained from visual methods. Nossiter and Biberman (1990:15) state that by requesting a drawing this focuses the interviewee's response on a single salient feature or perception of the organisation or situation, leading to honesty and parsimony, whilst Kearney and Hyle (2004) found that the drawing experience lead to a more succinct presentation of the respondent's experiences. Nossiter and Biberman (1990:15) also found there was a willingness from the respondents to comply with the study and the creativity aspect was motivational in getting people to analyse their organisation. Vince and Broussine state that visual drawings allow participants to 'say the unsaid' (1996:9), whilst Warren applies the phrase 'a picture paints a thousand words' (2009:566) to encapsulate the worth of visual methods to generate rich data within organisational settings. Thus the use of drawings provides access to emotions or unconscious aspects of organisational experience (Vince and Broussine, 1996). Symbols and metaphors are deemed central to the construction of meaning (Gioia *et al.*, 1994), whilst Barner (2008) points to the construction of drawings as visual metaphors to provide a vehicle for interpreting and framing experiences of organisational change. However, Meyer (1991) points to the drawbacks of using visual methods, stating that "...visual data can be enormously compelling, even if their validity is low" (1991:231). Another issue raised is that of minimising the input of the researcher in order to reduce the impact of preconceived beliefs; if the interviewee is left to their own devices, then their data may be ambiguous (Meyer, 1991:232). However, Kearney and Hyle state that

“...the lack of structure in the drawing exercise encouraged participants to identify whatever component or components of their experiences with change most impacted them” (2004:378)

This proposition may also help to combat any preconceived ideas from the researcher. In their study, Kearney and Hyle (2004) found that interviewees may be reluctant to participate in a drawing exercise due to their lack of artistic ability, yet this goes against the findings of Nossiter and Biberman (1990) and Meyer (1991) who state that participants were keen to engage in the activity when asked. Kearney and Hyle (2004) agree with the findings of others (Nossiter and Biberman, 1990; Meyer, 1991; Silverman, 2001) who state that drawings are an important additional source of data with the proviso that visual data are collected in conjunction with questionnaires and / or interviews for the most valid results. Pertinent to this research is the use of drawings as visual metaphors to enable university members to better interpret and to make sense of the environmental management changes (Barner, 2008:124). Understanding is said to occur through the use of symbols (images, drawings, metaphors) which are basic to the sensemaking process (Gioia *et al.*, 1994:365). Following Barner (2008) this research illustrates how the use of drawings can aid in-depth understanding of organisational events.

4.7.1 Data Generation through Drawings

“Metaphors possess several qualities that make them potent conveyers of emotional experience. They are compact in that they make use of a single word, phrase or visual symbol or object to convey a complex event or process. In doing so, they provide us with a means of linking a broad array of interrelated thoughts, feelings and beliefs” (Ortony, 1993, cited in Barner, 2008:122).

Barner emphasises this statement in that metaphors provide a means for emotional expression, helping organisational members to interpret and make sense of events

(2008:120). For this study additional data were collected through asking most, but not all, interviewees for a visual representation of their views and understanding of the environmental initiatives, as discussed in their interview. This 'freehand sketching' (Meyer, 1991:224) aims to understand emotions or unconscious aspects of the individual's experience (Vince and Broussine, 1996; Gioia *et al.*, 1994; Barner, 2008) by focusing on a salient feature or perception of the situation (Nossiter and Biberman, 1990). Meaning is socially constructed based on the interpretation of information and events (Clarkson, 2007; Brown *et al.*, 2010), with the use of images being said to aid the understanding of new experiences as individuals try to ascribe meaning through metaphors and symbols. During organisational change, individuals search for meaning through a retrospective look at past events in order to provide plausible explanations (Weick, 1995). Thus sensemaking is a way for members to reduce confusion (Angus-Leppan *et al.*, 2010a). Similarly, Gioia *et al.* (1994) promote that meaning is created through symbolic or metaphorical representation, stating that symbols are 'basic to the process of sensemaking' (p. 365).

This element of the interview process was a 'surprise' after the interview had been completed. Not all participants provided a drawing, either because of time constraints or simply because they felt unable to do so. Paper and coloured pens were provided for the exercise. Many interviewees expressed concern at not having any ideas of what to do or for having any drawing ability, but it was made clear to participants that this was not an artistic exam. One respondent even stated that 'my four year old daughter would be great at this!' Overall most interviewees were happy to comply with the request and a few were very enthusiastic about drawing. This mixed reception to the request for drawings is in line with the contradictory findings of



Kearney and Hyle (2004), who found that interviewees may be reluctant to draw, and with Nossiter and Biberman (1990) and Meyer (1991) who found participants to be keen to engage. The researcher was reluctant to give prompts but in several cases it was necessary in order to get the drawing started. This aspect raises concerns over the input of the researcher. Meyer (1991) proposes that the data may be ambiguous if the participant is left to their own devices, yet Kearney and Hyle (2004) contradict this by pointing to the lack of structure in the exercise which encourages participants to identify their experiences. Initially a simple Venn diagram was suggested to show the impact of environmental aspects on the interviewee, but later in the interviewing process, if a prompt was needed, then a visual representation of any aspect of the interview was suggested. This in fact led to a more free-thinking visual representation rather than a more rigid diagram, in line with Kearney and Hyle (2004:378). After being given time to complete the exercise, the interviewees were asked to define or interpret their drawings (following Kearney and Hyle, 2004:376; Barner, 2008) which often led to quite animated explanations. This process enabled the interviewees to describe the drawings in their own words and illustrate their views on the environmental initiatives, allowing individuals to reveal "...conscious and unconscious emotions" (Vince and Broussine, 1996:8). The interpretation of the interviews and drawings is discussed in the section below.

4.8 Analysis of the Data

"Analysing data is the heart of building theory from case studies, but it is both the most difficult and the least codified part of the process" (Eisenhardt, 1989:539).

The data generation provided over 500 pages of interview transcripts and 42 visual drawings. Silverman points to the value of working with a 'clearly defined' analytic

approach (2006:194), whilst Fitzgerald and Dopson point to the iterative process and the key stages of familiarisation, reflection, conceptualisation coding and linking of the comparative case studies during analysis (2009:480). In addition, Miles and Huberman propose that qualitative analysis consists of "...three concurrent flows of activity: data reduction, data display and conclusion drawing/verification" (1994:10). Following Eisenhardt (1989) the interview data are analysed within each case to gain familiarity with the data and to "...become intimately familiar with each case as a stand-alone entity" (1989:540) allowing for "...unique patterns of each case to emerge before investigators push to generalise patterns across cases" (Eisenhardt, *ibid.*). A manual process was undertaken to manipulate and interrogate the textual data. The process of data exploration began with the initial coding of the 500 plus pages of interview transcripts, keeping the text in the rich, 'thick descriptive' (Miles and Huberman, 1994:10) format with the relevant interview reference code and interview question number; a technique which enabled the data to be tracked to the source at all times. This first-level organisational analysis provided seven themes aligned with the management literature as follows: Environmental Management System implementation, Environment Champion, Proactive Leadership, Individual Actions, Top Management support, Competition with other universities and the Importance of a 'green' image. The themes were generated through an iterative process of analysis (Fitzgerald and Dopson, 2009), with data reduction and display providing familiarisation with the data (Fitzgerald and Dopson, 2009; Miles and Huberman, 1994). This high level descriptive coding revealed the initial themes and concepts in the data by asking the questions of 'what is going on and why?' This process produced an array of organisational themes and issues in connection with environmental management. The seven most pertinent themes being selected for the

purpose of the cross-case analysis discussed in Chapter Five. The diverse range of topics arising from this first-level analysis highlights that sensemaking of change within organisations is not shared between individuals and is not an accurate reflection of what has occurred (Clarkson, 2007; Alvesson and Sveningsson, 2008).

Further interrogation of the data through the lens of sensemaking identified sources of ambiguity and uncertainty in relation to the environmental management initiatives being undertaken at the universities. In addition, the themes of ambivalence as concurrent positive and negative responses along with resistance as organisational cynicism and negative feelings towards the universities are also revealed. The analysis of the data in line with these themes is discussed in Chapters Six and Seven.

The techniques of data management and display enabled the data to be interrogated through the lens of sensemaking (Weick, 1995), with the data being reviewed for sources of ambiguity and uncertainty which trigger sensemaking in line with McCaskey (1982, in Weick, 2001:45). Sensemaking theory can be used to explain ambiguity and uncertainty within organisations (Weick *et al.*, 2005; van der Heijden *et al.*, 2010), whilst Angus-Leppan *et al.* (2010a) propose that sensemaking is a way for individuals to reduce confusion. To reveal the sensemaking of individuals the researcher undertook an interpretive reading of the data in line with Mason (2002), who points interpretive reading as constructing a version of what the researcher thinks the data mean or infer. Denzin and Lincoln (2008) point to qualitative interpretations being 'constructed' from data and being "...re-created as a working interpretive document that contains the writer's initial attempts to make sense of what he or she has learned" (2008:34). Here, the researcher aims to explore the

individual and collective understandings and reasoning processes (Mason, 2002) through interpretivism, teasing out ‘hows’ and ‘whats’ of social reality (Holstein and Gubrium, 2005:484).

From the 58 interviews a total of 16, four from each university, are selected for in-depth analysis in Chapters Six and Seven. Effective analysis of text depends on detailed data analysis of a limited body of data to work with (Silverman, 2006:194). To limit the amount of data, Silverman proposes to “...take only a few texts or parts of texts” (*ibid.*). These 16 individuals and their data extracts are selected on the basis of representing a cross-section of those interviewed at each university and for providing pertinent data on individual sensemaking. Most, but not all, of these interviewees provided a visual drawing for additional analysis. The data extracts are interrogated under what Holstein and Gubrium term “interpretive practice” (2005:484), being the procedures for understanding everyday life and the ‘hows’ and ‘whats’ of social reality. However, care is taken to ‘produce valid generalisations’ (Dingwall, 1980, in Silverman, 2005:327) through dealing equally with people from all levels of society.

The “interpretive practice” was extended to the interpretation of the drawings to discover the “...more unconscious or less rational aspects” (Nossiter and Biberman, 1990:13) of the interviewees’ experiences of environmental management initiatives. Mason (2002) talks of drawings being interpreted for their meanings and what they represent, whilst the interpretive analysis teases out emotions or unconscious aspects depicted in the drawings; revealing ‘the unsaid’ (Vince and Broussine, 1996:9). The interpretive analysis of the researcher follows the initial, more literal, explanation of

the drawing given by the interviewee. The drawings are interpreted by the researcher through the lens of sensemaking, where individuals retrospectively create new meanings to cope with ambiguities within university life (Weick *et al.*, 2005) and 're-sort experiences' (Brown *et al.*, 2008:1052). When trying to understand a new experience, people 'ascribe meaning to it' (Gioia *et al.*, 1994:365). The use of visual images and metaphors is 'basic to the process of sensemaking' (Gioia *et al.*, *ibid.*) and can help organisational members 'better interpret and make sense of organisational change' (Barner, 2008:124). Through the drawings, these individuals are able to "...determine their own highly personal interpretations of what has occurred" (Brown *et al.*, *ibid.*) through their unconscious 'inner objects' (Warren, 2009:574). It is these unconscious 'inner objects' which are accessed by the researcher through the drawings (Vince and Broussine, 1996; Kearney and Hyle, 2004). The analysis of the drawings is discussed in Chapters Six and Seven.

4.9 Summary

This research aims to contribute to the existing debate on individual sensemaking of environmental management initiatives within four case study universities in South Wales. This Chapter provided an outline of the interpretivist methodology of the research, going on to describe in detail the process of qualitative methods of data generation through semi-structured interviews, images and documentation. The interpretivist methodology and qualitative research methods enabled the researcher to focus on the 'hows' and 'whats' of social reality and to explore individual and collective understandings (Mason, 2002; Holstein and Gubrium, 2005). In addition, the semi-structured interview approach promoted individual sensemaking of environmental management within the case study universities through members

retrospectively ascribing meaning and understanding to their experiences (in line with Gioia and Chittipeddi, 1991; Weick, 1995; Angus-Leppan *et al.*, 2010a). Visual data in this research comprises freehand images, providing metaphors and symbols to help create meaning and understanding of individual's experiences (Barner, 2008; Gioia *et al.*, 1994). As such, this thesis contributes to the growing use of visual data methods which are said to be underused within organisational research (Warren, 2009).

The following Chapter introduces the four case study universities in detail and provides an analysis at university level, whilst Chapters Six and Seven provide analysis of individual sensemaking.

Chapter 5: The Four University Case Studies

5.1 Introduction

This Chapter introduces the four case study universities and discusses the pertinent issues arising from the first-level analysis for each case. In line with Eisenhardt (1989:545) data are collected from four university cases as this allows for sufficient theory generation, and, Yin (1994) also confirms the use of multiple-case studies to provide a stronger basis for theory building. The first-level analysis provided the seven pertinent organisational themes of Environmental Management System implementation, Environment Champion, Proactive Leadership, Individual Actions, Top Management support, Competition with other universities and the Importance of a 'green' image. These seven themes were generated through an initial analysis of the data in line with the management literature, as discussed in Chapter Four.

This Chapter goes on to provide background information on environmental management within each the case study which acts as a basis for the discussion of individual sensemaking of environmental management in Chapters Six and Seven. The cases provide examples across the spectrum of universities in South Wales, with two cases being from the older, established sector and two from those termed 'new' universities which have been created universities since 1992. At the time of the research, three of the case studies represented the largest universities in Wales with Swansea Metropolitan being the newest UK University.

It is important here to reiterate the challenges faced by the university management regarding new managerialism and the pressures of becoming more accountable for public funding. The concept of new managerialism is being increasingly faced by

universities, and one which requires them to adapt and change (Deem and Brehony, 2005:217). Universities are facing external pressures to become more cost-effective (Dearlove, 2002) which requires the application of private sector management principles and practices (By *et al.*, 2008; Diefenbach, 2007). However, this new form of managerialism tends to mean more power in the hands of Vice-Chancellors and managers remote from academic work (Dearlove, 1998). As such, it is important to generate support for change initiatives from faculty and departments to counter top-down management and to gain support from academics (Dearlove, 1998; 2002). There is, therefore, an increasing need for universities to act strategically because of the increasing demands to be held more accountable to society (Gioia and Chittipeddi, 1991).

The discussion begins with the outcomes of the cross-case analysis which provides a synopsis of the themes arising from the initial analysis. Following this, a factual background to each case university and its history of environmental management is provided, the outcomes of the within-case analysis and discussion linked to the management literature. This outline follows Eisenhardt (1989:533) who proposes within-case analysis to gain familiarity with the data and to "...become intimately familiar with each case as a stand-alone entity" (1989:540). The chapter provides an insight into the implementation and practice of environmental management initiatives in each case through the eyes of those charged with managing the processes and also academic and non-academic staff and students within the universities. Each case explores specific complexities of managing changes within universities including top management commitment, management styles, communication gaps and engagement of the whole campus. The cases highlight the

many issues and problems which universities face whilst implementing environmental management initiatives and putting these into practice. As someone who personally supports universities implementing environmental measures, I find the lack of progress frustrating but at the same time the manner of each approach is illuminating.

5.2 Cross-Case Analysis

Following Eisenhardt (1989) cross-case analysis identifies the similarities and differences of each case to “...search for patterns” (p. 540) beyond the initial impressions and to look at the data in “...many divergent ways” (*ibid*). The approach taken here is one advocated by Eisenhardt (1989) for cross-case comparison whereby selected categories, suggested by the research problem and the existing literature, are used to search for similarities and differences across the cases. This cross-case analysis discussed here arises from the themes revealed in the initial, first-level organisational analysis of the data which then informed the basis of the individual data analysis through the lens of individual sensemaking. The purpose of this first-level analysis was to highlight the major themes arising in the data being linked to the literature review. These broad themes are reiterated in the individual data analysis discussed in Chapters Six and Seven. This cross-case analysis provided a first-level analysis from which to interrogate the data further through individual sensemaking of environmental management practices. Sensemaking theory was deemed appropriate to this research as individuals had been requested to retrospectively evaluate and recall their experiences of environmental management by the researcher. This cross-case analysis shows that sensemaking of change processes in organisations is not shared and is not accurate (Clarkson, 2007; Alvesson and Sveningsson, 2008), thus

providing the diverse range of themes in Table 5.1 below. The analysis revealed broad themes (aligned with the literature review) including external and internal drivers and environmental leadership. External drivers are revealed in the data as competition with other universities and the importance of an environmental image (Comm and Mathaisel, 2005; Spellerberg *et al.*, 2004; Studer *et al.*, 2006). Internal drivers are revealed as the aspects of environmental leadership, being the Environmental Champion, Proactive environmental leadership, the existence of top management support and individual actions (Sammalisto and Brorson, 2008; Clarke and Kouri, 2009).

The seven categories highlighted in Table 5.1 below provide a synopsis of the data, being the most prolific themes arising from the analysis. The seven categories of Environmental management system implementation (EMS), Environment Champion, Proactive Leadership, Individual Actions, Top Management support, Competition with other universities and the Importance of a 'green' image are discussed in detail below. These categories are compared and contrasted between the cases through the use of the table below; a design which enables the comparison of several categories at once (Eisenhardt, 1989:540).

5.2.1 Environmental Management System (EMS)

Resulting from the interview and documentary data gathered the researcher ranked the status of each university regarding its EMS, whether there is one in place or how far the implementation has taken place at the time of research. Glamorgan has a full EMS in place reflecting the high ranking by the researcher, whilst Cardiff and Swansea Metropolitan are in the process of implementation. Swansea has been

ranked lowest by the researcher due to the little or no progress at the time of the research.

5.2.2 Internal Drivers

The category 'Environmental Champion' relates to interview and documentary data. The interviewees were asked to recall who they felt instigated or 'pushed' environmental management within their university. The table reflects that at Swansea Metropolitan the Environment Manager is instrumental in advocating initiatives, whilst at Cardiff, the manager tasked with implementing the environmental management system is 'pushing' the initiative to both university leadership and members. The researcher ranks Glamorgan and Swansea lower due to the lack of an Environmental Champion at these universities. The theme 'Proactive Leadership' arises from the reflections of the interviewees as to their views of environmental leadership. The individuals at Swansea Metropolitan reflected that the Vice-Chancellor is proactive in driving initiatives and provides backing to the Environment Manager, giving Swansea Metropolitan the highest ranking. In comparison, interviewees at Swansea reflected that there was little or no proactive environmental leadership. 'Individual Action' arises as a contrast to proactive leadership, which is clearly reflected in the researchers' ranking in the table. Most individual action takes place at Swansea due to the perceived lack of environmental leadership. The onus is on individuals to take action, whilst at Swansea Metropolitan, individuals do not feel the need to act because of the initiatives put in place by the Environment Manager. The final internal driver is 'Top Management Support' as interviewees revealed their views of management support for environmental initiatives. At Swansea Metropolitan the view was of 'middle-up-down-out' support

through the University, whereas management support at Cardiff and Glamorgan was seen to need more focus and engagement with members lower down.

5.2.3 External Drivers

The category 'Competition' highlights the aspect of using environmental management as a competitive tool between universities in the data. Interviewees at Cardiff related to the use and usefulness of environmental management as a competitive tool whilst in comparison, at both Swansea and Swansea Metropolitan, the concept of using their environmental management initiatives for competition with other universities did not arise in the data. The final category is 'Image Importance', whereby Swansea Metropolitan is revealed in the data as a university which likes to be considered 'green' and one which publicises its environmental achievements. The researcher reflects this by the highest ranking in Table 5.1. Interviewees at Cardiff also relate to environmental initiatives being a 'selling point' to students, whilst the data from Swansea reveals that the University leadership does not consider an environmental image.

5.2.4 Outcomes of Cross-Case Analysis

The rankings shown in each category are those allocated by the researcher, being based on the analysis outcomes. Each case is ranked within each category by being given a placing from 4 to 1, where 4 is given for a strong indicator of behaviour and 1 being the lower indicator. The justification for the outcomes of the cross-case analysis shown here is provided in the detailed discussion of each case within this chapter. The table below provides a summary of aspects of environmental

management at each of the case study universities, enabling a way to compare and contrast each case within each category.

Table 5.1: Outcomes of Cross-Case Analysis

Case	EMS	Env. Champ	Proactive Leadership	Individual Action	Top Mangt.	Competition	Image Importance
Cardiff	3	3	2.5	2	2.5	4	3
Swansea	1	1	1	4	1	1.5	1
Glamorgan	4	2	2.5	3	2.5	3	2
Swansea Met.	2	4	4	1	4	1.5	4

For the purpose of cross-case analysis it is important to bear in mind the ages of the universities, with Cardiff and Swansea being the older, established universities and Glamorgan and Swansea Metropolitan being the ‘new’ universities, as this aspect could be relevant to the managerial styles and structures of each university. Despite Glamorgan University already having an environmental management system in place, Swansea Metropolitan University is ranked more highly for the work done by the Environment Manager, for the proactive leadership and support from top management. This proactive stance in turn leads to the importance placed on environmental publicity and enhanced image at Swansea Metropolitan University. However, the aspect of competition with other universities and the benefits from implementing an environmental management system are the strongest indicators of behaviour at Cardiff University, with the environmental management system in place at Glamorgan University not being used overtly for publicity purposes. As highlighted in the within-case discussion in this chapter, the activities of individuals is the lowest at Swansea Metropolitan University which is partly due to the autocratic

leadership style of the Environment Manager. This is in stark contrast to the behaviours of individuals at Swansea University who, in the absence of proactive leadership, support from senior management and an active Environmental Champion, take it upon themselves to be proactive and implement environmental management measures where they can. However, it should be noted that there is a strong notion of individual action and emergent approach at Glamorgan University, despite the environmental management system being already in place. This again reflects the lack of commitment from leadership and senior management to integrate environmental considerations into the everyday workings of the University. It is difficult to surmise similarities and differences between the 'old' and 'new' universities. Glamorgan University was the first university in this study to implement environmental management measures through the support of the Directorate, but since this time senior management commitment has waned. In comparison, interest from senior management at Swansea Metropolitan University is increasing. This can also be said for Cardiff University; although the management structure is more complex than that at Swansea Metropolitan University, senior management interest is increasing yet without full commitment at present. However, senior management at Swansea University have yet to grasp the importance and benefits of implementing an environmental management system.

The cross-case analysis provides an interesting synopsis of comparisons between each university. In the absence of a formal environmental management system, Swansea Metropolitan University pushes environmental measures through the work of the Environment Manager and support from top management. This is in comparison to Glamorgan University where the environmental management system

is not being supported by the Directorate. Cardiff University is in a strong position to implement its environmental management system but needs proactive leadership and commitment from senior management to do so, whereas Swansea University is struggling to implement its environmental management system without commitment from the Environmental Champion and the Senior Management Team, instead remaining reliant on the actions of individuals.

Despite these universities being different in age and size, they face similarities in the issues regarding the implementation of environmental management initiatives. However, none of the universities reflects the important role of the senior Environmental Champion supported by management with the necessary skills and attitudes. The remainder of this Chapter provides a detailed within-case discussion of the management and implementation processes of environmental management initiatives within each of the case-study universities. The discussion begins with the old universities of Cardiff and Swansea.

5.3 Case I: Cardiff University

5.3.1 Background to the University

Cardiff University is the oldest university in the study which dates from 1883. Although situated in the city centre it is based in a variety of buildings on the Cathays Park campus, not a single site, along with the Heath Park Campus north of the city centre. Being in the capital city of Wales, the transport links for the University are excellent with a total of three train stations in the city centre, the nearest of which is only a few minutes' walk from the main university buildings in

Cathays. The University has in the region of 28,000 students and 6000 staff working in twenty-eight academic schools.

5.3.2 Environmental Management

The University, in partnership with the Cardiff and Vale NHS Trust, already has an ISO 14001 certified environmental management system relating to the Heath Park Campus which has been in place since 2003⁷. However, the University is currently working towards the implementation of an ISO 14001 certified environmental management system across the entire campus. The catalyst for this was the report funded by the Higher Education Funding Council for Wales in 2005 regarding energy, waste and water in the Higher Education sector in Wales, after which Cardiff University set up its own Energy, Waste and Water working group. Funded by the Higher Education Funding Council for Wales, a pilot project has been put in place to begin this process which is expected to last for twelve months, with the environmental management system being trialled in three schools within the main Cathays campus. The process is being managed through the Occupational Safety, Health and Environment Unit (OSHEU) by the Assistant Director of Environment and the Environment Officer. A network of around sixty Eco-Champions was established during 2006 to progress the communication of environmental initiatives throughout the University. At the same time a number of energy saving projects were identified and the following year there was a 13% saving on the University's energy bill. This saving was put down to the formation of the Eco Champion network and increasing general awareness of reducing energy use.

⁷ The details of the environmental management system in place are available at www.cardiff.ac.uk/sustainability

5.3.2.1 Environmental Management Initiatives

In the June 2009 Green League table, the University rose from 84th place to 17th due in part to the Advanced Research Computing data centre receiving a 'highly commended' award and to the prominence of the Sustainability website. The Computing data centre is a state-of-the-art research computing facility which uses innovative modern technologies to minimise energy costs and environmental impact. At the time of the research, the environmental initiatives being implemented were concentrated on saving costs through using less energy. Simply by instigating a 'power down' system overnight for computers, the University expected to make a saving of £100,000 over the next year. With regards to transport the University does operate a car share scheme for staff, but the interview data highlights that the time taken for travelling to work is a sensitive issue for some staff and that a transport policy could be problematic to enforce. It is also noted that some staff would be reluctant to stay at work as late as they currently do if they had to travel by public transport, as this would make their journey time longer.

5.3.2.2 Eco Champions Network

The Eco Champions Network holds bi-monthly meetings where, in October 2009, the initial reporting of the utility monitoring was discussed. The researcher was kindly invited to the October 2009 meeting, where around thirty of the Network Champions attended. During the previous couple of years the University had received funding from the Higher Education Funding Council for Wales to install a number of auto-data collection meters. To date, around 800 meters have been installed in 180 buildings. This has provided the University with a bewildering amount of data to analyse, but it is hoped that by providing the Eco Champions with

detailed graphs of resource (electricity, water and gas) use in their buildings then the University will attain its target to reduce energy consumption by 10% in 2012. The University had already been monitoring its energy data by manual readings since 1985. Analysis of this data so far shows that the laboratories are the highest energy users in total but that computers are the highest energy users per m² floor space. Fume cupboards in particular use a large amount of energy, being in use 24 hours a day. However, the University does not want to compromise important research by insisting on lower energy use, thereby necessitating the implementation of more energy efficient equipment when the funding is available.

During the Eco Champions' meeting there was much discussion about the Carbon Reduction Commitment scheme coming into place in April 2010 and the importance for the University to reach the Carbon Standard, and to therefore qualify for the full refund of energy costs. The importance of getting information across to staff members was stressed in order to reduce overall energy use. Some Eco Champions noted that it was still difficult for them to get the message across to staff in their departments about saving seemingly small amounts of energy, particularly from using kettles and leaving equipment on standby. By providing detailed analysis of energy use for each department, it is hoped that it will be easier for the Eco Champions to inform staff on energy saving initiatives and to reduce energy use and therefore costs.

5.3.2.3 Environmental Policy

The University's Environmental Policy sets out a number of key principles which are to be adopted throughout the main University campus. These principles include the

setting of environmental objectives and monitoring progress against them, whilst recognising that the minimum acceptable level of environmental performance is stipulated in environmental legislation. The University seeks to reduce air, water and land pollution as a result of its activities and to manage the efficient use of energy and water whilst minimising the amount of waste generated. The Policy also states that a purchasing policy will be adopted to take account of the environmental performance of suppliers, goods and services and that natural resources will be preserved through utilising supplies obtained from sustainable resources where practicable. It is also stated that suitable environmental training for appropriate personnel will be provided whilst promoting general environmental awareness to all staff and that the University's environmental performance will be communicated to all staff, students and other interested parties.⁸

The University also has a separate Energy, Water and Waste Management Policy which aims to minimise expenditure and environmental impact through efficient management of these resources. The Policy is to be reviewed and updated annually by the Energy, Water and Waste Steering Group which reports to the Strategy and Resources Committee. The document comprises a ten-point plan which is to be implemented through a Strategic Energy, Water and Waste Management Action Plan and includes details on the responsibility for actions; the selection and purchasing strategies for energy, water and waste disposal; the investment in energy, water and waste efficiency savings schemes and decisions made on the purchase of equipment

⁸ The Environment Policy is available at www.cardiff.ac.uk/sustainability

which have a significant impact on energy, water and waste costs through Whole Life Cycle Costing techniques.⁹

5.3.3 Environmental Management System implementation at Cardiff

Cardiff University is pushing ahead with the implementation of the formal environmental management system throughout the whole campus, which is being led by the same manager who previously implemented the environmental management system at the Heath Park site. As such, the University possesses the important environmental management knowledge and leadership skills which are deemed necessary to take this proactive approach (Revell and Rutherford, 2003). There is much reference to the competition that now exists between universities in the UK for students and funding, with the feeling that Cardiff should be at the forefront, and as such this acts as an external driver for the environmental management system. Porter and van der Linde (1995) point to the competitive advantage to be gained from similar innovation, whilst Spellerberg *et al.* (2004) and Sammilisto and Brorson (2008) list the possibility of attracting students in a competitive market as a driver for environmental management system implementation. Marketing the environmental management initiatives makes 'attractive business sense' (Susan, middle manager) and the data shows that there is awareness to promote environmental management within the University to attract funding and students, as advocated by Studer *et al.* (2006) who point to 'green' publicity to enhance reputation as environmental compliance is seen as necessary to compete. However, there is much support for environmental initiatives within the data and a feeling that the University should be doing more and at a faster pace. This causes a certain level of frustration as the pace

⁹ The Energy, Water and Waste Management Policy is available at www.cardiff.ac.uk/sustainability

of implementation is seen as 'glacial' (Derek, PhD student) with individuals still needing to be proactive and self-sufficient in certain instances. One important internal driver for Cardiff is its high energy costs which are expected to reduce through environmental management measures. With this in mind, the study by Clarke and Kouri (2009) shows that cost savings are an initial driver and Comm and Mathaisel (2005) propose that with universities aiming to become more competitive, reduced costs could lead to higher margins allowing available funds to be spent elsewhere.

There is now said to be 'interest from on high' (Owen, Eco Champion) due to senior academics sitting on the Sustainability Working Group committee, yet the environment is still not seen as a priority for those with the influence to implement measures (Su Yol and Seung-Kyu, 2007). The dichotomy is that the environment is 'on the agenda' but that it is 'not a priority' (Susan, middle manager). One problem for those trying to implement the environmental management system is that responsibility is fragmented throughout the university, so that on the one hand there are formal working groups but on the other hand managerial responsibility is split between departments, causing frustrations. There are two change agents (Sharp, 2002): one who is charged with setting up and running the Eco Champions Network and one who is managing the environmental management system process. These two staff members are from different Departments and in addition, the Estates Department has responsibility for energy costs and savings. The challenge for the environmental management system manager is to engage the whole campus in line with Clarke and Kouri (2009) and Christensen *et al.* (2010) as due to its large size, communication is difficult across the campus. This problem is exacerbated by the

disjointed management structure for the environmental management system, with several managers in separate departments being responsible for different aspects. Therefore the Director for the environmental management system cannot take overall control for the implementation process. With this type of structure in mind, Sharp (2002) points to the 'challenge of the change agent' (p. 142) and the complex nature of universities. To aid the process there needs to be a large number of people involved to establish new routines, which in this case are the Eco Champions. The University follows a functional management structure with individual Schools having devolved responsibility. The challenge is to cut through the central administration functions and Schools' hierarchal structure to create a less formal structure, in line with the whole systems approach advocated by Koester *et al.* (2006) which brings together the academic, administrative and facilities management. To aid this process the Eco Champions Network is made up from staff across the University at all levels which should act to engage the whole campus by taking ideas and creating ownership for the process (Wright, 2006). At Cardiff the Network is expected to aid communications and information sharing across the University, yet it is not related to in the data from those not involved or connected with it, which highlights the problems of disseminating information. In addition, those responsible for the environmental management system do not have overall line management control over the decision making process. As such, the inclusion of environmental management issues in the staff induction process is under the control of those running the inductions and not those running the environmental management system.

Implementation of the environmental measures relies on voluntary execution by individuals, causing those responsible to feel helpless to progress the measures

without resorting to 'nagging' (Susan, middle manager) colleagues. Their hope is that individuals will pick up cues from their work colleagues as to the small measures they can implement. Others note that any enforcement could create tensions and that the 'softly, softly' (Joe, Lecturer) approach to changing attitudes is probably the best way forward. This aspect highlights the frustrations of those responsible and interested individuals in trying to gain commitment from others. Those responsible can see the need to implement more initiatives at a faster pace but do not have the authority to do so. Whilst many people are generally interested in environmental measures they are not willing to have them enforced upon them, highlighting the ambivalent, mixed feelings about the process (Piderit, 2000). The ambivalence is highlighted in the discussions surrounding some of the measures already implemented. Based on the notion that the interviewees are generally positive about recycling and saving energy and resources, there are some instances which create negative reactions. All staff are being formally encouraged to recycle as much as possible, but there are concerns amongst staff about contamination and the fact that recycling bins have been observed being emptied into general waste bins. Commitment from staff to recycle is therefore potentially reduced as they are unsure about the outcome of their actions, creating conflicting responses (Piderit, 2000). The Business School has fitted sensor lighting in all public areas, which is seen as a positive action by staff to reduce unnecessary energy use. However, some interviewees have noted that this causes them some distress at night time, especially when they are working alone (Helen, Lecturer). The corridors outside their offices are in darkness, but when the lights go on they know someone else is there but they do not know who it is. This is another example of ambivalent, mixed cognitive / emotional, response to initiatives (Piderit, 2000).

The task of the Eco Champions network is to disseminate good practice and to encourage new behaviours, with the purpose being not to push the environmental management system but to 'nag people and to provide information' (Owen, Eco Champion). Those within the network are confident that they are beginning to make a difference, but in the data Eco Champions are not referred to by those from outside the network which raises the question of how effective their information dissemination really is. The network is said to share best practice but not in a 'highly structured way' (Roger, middle manager). Again, this aspect highlights the problems of the inability to communicate and enforce new environmental behaviours. Communication of environmental measures within the University is regarded as a 'massive challenge' (Susan, middle manager) because it is such a large organisation which is dispersed over many sites. There are several formal methods of communication in use such as posters, memos, e-mails and the computer notice-board. However, there is a mixed response to the e-mails as staff and students note that they receive many e-mails during the day and that they purposefully filter which ones they are going to read, depending on time available and their personal interests. This leads to much of the communication being left unread. Also there is a similar problem with communicating through the computer notice-board which relies on the user logging-out of the system and then logging-on to the computer to read the messages. Whilst some staff and students follow this routine and read the notices, others admit to not logging-out of their computers so that the notice-board does not appear. This means that it is possible for users to bypass this formal method of communication. Introducing the issue of environmental management into the staff inductions is problematic due to the lack of time allocated to the process. Those trying to instigate the promotion of environmental materials are having to fight to be

allocated sufficient time. This reveals that the introduction of measures to new staff is not considered essential at this time. The challenge of communication highlights the difficult role for the Environment Manager to span the communications gaps between staff, students, faculty and management (Velazquez *et al.*, 2005; Clarke and Kouri, 2009). Due to the complex structure of the university there are weak social networks (Evangelinos and Jones, 2009) which are unable to transmit information, but the Eco Champions Network should in time cover these gaps through face-to-face dialogue and a participatory approach within Schools and Departments (Lines, 2004; Sharp, 2002). The importance of good communication of the environmental management system should not be underestimated (Daly *et al.*, 2003; Elving, 2005). One other contentious issue is the method of communication used for some of the measures. Again, although these measures are brought in to reduce waste which is seen as a positive action, the method of communication creates tensions and with it a negative aspect to the implementation. One particular example of this is where a notice was 'stuck' on to a staff coffee machine "from the administrator" (Helen, Lecturer) stating that staff should now use their own mugs instead of the plastic cups. This is seen as a positive move but the method of communication as negative, following the cognitive versus emotional responses advocated by Piderit (2000).

Many of the interviewees perceive that the environmental measures are being implemented for financial motives over environmental motives. This again promotes ambivalence (Piderit, 2000) towards the measures as people agree with the moral and environmental reasons, but that deep down they feel that the university is only interested in the financial incentives which relates back to the previous notion of 'greenwash' by University management. However, there are those who feel that any

cost savings made by the University, in any guise, is a positive move as this releases funds for other uses (following Clarke and Kouri, 2009). In fact this perception is borne out by the admission of senior administrators that Schools are run on business, economic decisions and not environmental decisions. One example given was the use of recycled paper for printing and photocopiers. Whilst the Administrator was personally inclined to use recycled paper, he was not prepared to buy it as previously the quality had been substandard and the paper had caused photocopiers and printers to become jammed. He therefore took the business decision to buy non-recycled paper to avoid problems with the equipment.

The topic of transport to and from work created the most negative reactions. Given the general positive agreement on environmental measures, any personal impacts of these are perceived as negative by the individuals. Committed individuals have joined the car share scheme, cycle or use public transport for their daily commute. But despite others being committed to recycling and other resource saving initiatives, they fiercely protect their need to drive their cars to work. The reasons (excuses?) given for this are the time taken, distance from work and family commitments. Despite the good location of train stations for the university, people have indicated that it would take them much longer to commute to and from work using public transport and that this would result in them shortening their working day. The university would therefore lose working time to compensate for the additional journey time as people are not prepared to extend their working day. Those not living close to train stations were not prepared to use buses or a mixture of available transport. One of the main reasons given for needing to use a car was because of the need to get children to and from school on time, or to save time on commuting to

spend time with the family instead. These contentious issues are the reasons why the University has so far declined to introduce a transport policy, preferring instead the voluntary 'softly, softly' approach. However, instead of staff switching to other forms of transport, the car parking permits are still in great demand. One of the interviewees had waited three years for a permit and the prices are increased annually, but this does not deter those wishing to drive. Putting aside the transport issues, individuals are looking at environmental measures as a work / home comparison. Committed individuals expect to extend their personal beliefs into their working environments and people who are now becoming more conscious at home expect to be able to take this behaviour into their work lives. In this respect the perception is that individuals are pushing the environmental measures as there is no visible strategy in place. This reveals a more emergent, bottom-up strategy (Burnes, 1996; Salaroo and Burnes, 1998) yet a mixed top-down and bottom-up approach is said to be the most successful (Clarke and Kouri, 2009). Although senior management are showing interest by chairing the working groups, there appears to be little genuine commitment or personal environmental interest from the University leadership which is deemed important for the environmental management system process (Hanson, 2004; Comm and Mathaisel, 2005; Fisher, 2003). Higgs (2009) and Higgs and Rowland (2005) recognise the importance of leadership and the profound effect of leader behaviour on the outcome. Only through being taken forward by management and individuals' own beliefs and initiatives will environmental considerations become part of the integral business decision making (Halme, 2002).

Whilst Cardiff possesses the technical management skills to implement an environmental management system (Revell and Rutherford, 2003; Comm and

Mathaisel, 2003), as yet there is not the commitment from University leadership to do so (Fisher, 2003; Henriques and Sadorsky, 2006). The fragmented management structure of having change agents in separate departments without having one manager in overall control also hinders the process. This aspect also impedes communications across the University as the weak social networks are unable to convey the message of environmental management. However, the Eco Champions Network should cut across Schools and Departments to enable communications and engagement of the whole campus (Christensen *et al.*, 2009; Wright, 2006). Improved communications across the University will help negate instances of ambivalence as individuals receive better information regarding environmental management initiatives and the reasons for their implementation.

5.4 Case II: Swansea University

5.4.1 Background to the University

Swansea is the second city of Wales and is situated approximately 35 miles west of Cardiff, on the south coast of Wales. Swansea University was created an individual university on 1st September 2007 from previously being part of the University of Wales, thus enabling the University to award degrees in its own name. There has been a university at the Singleton Park site since the 1920s. The University is currently situated on a single campus which is two miles west of the city and directly opposite the beach, surrounded by a large park behind. At the time of research, the University had approximately 15,000 students and 2,500 staff working in the Schools of Art and Humanities, Business and Economics, Engineering, Environment and Society, Health Science, Human Sciences, Law, Medicine and Physical Sciences.

5.4.2 Environmental Management at Swansea

The University has an active Sustainability Forum made up of staff and students which meets fortnightly to discuss sustainability and environmental issues on campus and how to take ideas forward. The Sustainability Forum has been instrumental over the years in driving the University to implement an ISO 14001 certified environmental management system. At the time of the research, the introduction of an environmental management system at Swansea University was expected to be complete by September 2010, after which the ISO 14001 certification process would begin. However, the original plan was to have an environmental management system implemented by May 2007. The Sustainability Forum was one of the main proponents for writing the Environmental Policy, which was accepted by senior management in 1999, and for driving the environmental management system process. The original proposal for the environmental management system was taken to the University Council meeting in December 2006 but after that time was met with a series of delays. Having gained initial acceptance from senior management for the programme to go ahead in December 2006 there were delays in gathering the appropriate data on energy and resource use in each of the University buildings, along with resistance from some senior management who failed to support the Environmental Engineer in their role. Following a change of senior personnel during 2007 and 2008, and with sustained pressure from the Sustainability Forum, an environmental management system working group was formed in December 2008 with the expectation to deliver the environmental management system by September 2010.

5.4.2.1 Environmental Policy

The revised Environmental Policy was signed by the Vice-Chancellor on 1st July 2010, setting out the University commitments to promoting the protection of the environment and minimising the impact from its activities and to integrating environmental management policies and practices into every level of the University. These commitments are to be achieved by such measures as reducing the use of fossil fuels through improvements in energy efficiency and greater use of renewable energy; taking reasonable steps to prevent ecological damage from hazardous materials; minimising waste by reduced consumption with more effective waste management and recycling and to use recycled materials and products where appropriate. The University also aims to cooperate with local transport initiatives, protect natural habitats, to increase the awareness of environmental responsibility among staff and students and to encourage collaborative research on sustainable development themes.¹⁰

5.4.2.2 Environmental Management Initiatives

Swansea University has not performed well in the Green League table in the past although it is hoped that with projects being implemented as part of the environmental management system, the University will improve its standing. During 2007 the University received £400,000 funding from the Higher Education Funding Council for Wales to install utility meters to measure energy and water use which are being monitored as part of the South West Wales Higher Education Partnership, with recycling also being more closely monitored through the project. The combined heat and power unit is to be redesigned in 2010 and after which is expected to produce

¹⁰ The Environment Policy is available at www.swan.ac.uk/university/TheCampus/Sustainability/Environmentalpolicy

approximately 60% of heat and one third of electricity requirements on campus. The electricity produced by the combined heat and power unit is cheaper than that bought in from outside suppliers, which will go some way to decreasing the reliance on buying the first tranche of energy certificates in April 2011. Despite not having a formal environmental management system at present, the University runs a car share scheme as part of the South West Wales electronic car share database along with Swansea Metropolitan University, and manages the campus site to enhance habitats and biodiversity. Recycling has increased due to the introduction of a number of recycling bins around campus and the University has Fairtrade status.

5.4.3 Environmental Management Practice at Swansea University

The implementation of an environmental management system at Swansea University has been ongoing since 2006. Under the South West Wales Higher Education Partnership funding, the environmental management system was due to be finalised by the end of 2010. However, this deadline has not been achieved. The environmental management initiatives currently in place are led by the Environment Engineer from the Estates Department. The environmental management system is not seen as a priority by senior management, with the University being run on an economic, business foundation. Environmental management is not used in a strategic way to encourage students and funding, or in a competitive sense. However, senior management does place an emphasis on university rankings and promotes environmental research in the media for publicity purposes. Although an Environmental Policy has been in place since 1999, it has not been overtly enforced and is not widely known throughout the University. In order to get the environmental management system 'back on the agenda' (Louise, Administrator) there is a need for

a high-level Environmental Champion as reticence and a lack of interest by the Senior Management Team are widely quoted as being the fundamental reasons for the drawn-out environmental management system implementation. However, the funding from the Welsh Assembly Government under the South West Wales Higher Education Partnership has provided much-needed impetus for the environmental management system programme. Porter and van der Linde (1995) advocate an environmental mindset to embrace new ways of working, yet the senior management at Swansea appear unwilling to embrace environmental management (Christensen *et al.*, 2009). Senior management at Swansea have not been proactive towards environmental management (Revell and Rutherford, 2003) and show a low-level understanding of the issues (Simpson *et al.*, 2004). One of the most influential factors which determines environmental strategy and direction is the attitude of top-level management to environmental issues (Su Yol and Seung-Kyu, 2007), whilst Fernandez *et al.* (2006) point to the characteristics of management and culture being key to successful implementation. The data reveal that the environmental management system has not been implemented because of the failure of senior management to support the project which is crucial for its success (Studer *et al.*, 2006). At present, Swansea does not have a strong senior leader with environmental vision; this is said to impede progress (Alshuwaikhat and Abubakar, 2008; Comm and Mathaisel, 2005; Sharp, 2002). In this respect there appear to be high internal barriers which are preventing the environmental management and environmental management implementation. In particular there exist the barriers of inadequate leadership, the support of top management, poor communications and past practice as highlighted by Post and Altman (1994), whilst Hillary (2004) points to poor management understanding and perception of the issues, attitudes and culture which

play a significant role in impeding progress. Whilst there has been an Environmental Policy in place since 1999, formal environmental management procedures have not been adopted (Christensen *et al.*, 2009). So far there has been an inability to engage the whole campus (Clarke and Kouri, 2009) and little or no consultation for generating ideas and sharing ownership has taken place (Wright, 2006).

Due to the lack of environmental leadership and a University strategy, individuals have been, and still are, implementing their own initiatives which creates a fragmented programme of environmental management measures. Middle managers are creating their own departmental procedures as opposed to being guided by a set of universal procedures. The bottom-up process has led to an *ad hoc* and 'laissez faire' (Valerie, Lecturer) system, with individuals having to 'muddle along' (Nina, Research Officer) with their own measures. This lack of strategy and planning has created much frustration for those who are keen to implement an environmental management system. With this and other initiatives, individuals have to persist in order to create changes and any progress is 'hard earned' (Paul, Administration Officer). Up until late 2007 Swansea was fortunate to have a senior Environmental Champion who had access to the Senior Management Team and who was personally dedicated to pushing the environmental management system upwards to the leadership (Henriques and Sadorsky, 2007). Since this time, however, the current Environmental Champion has been reluctant to be so proactive and the environmental management system process has lost momentum, which highlights the view that successful implementation is strongly correlated with management values (Hanson *et al.*, 2004). However, the lack of support from senior peers has also contributed to the lack of progress. This situation again highlights the crucial element

of senior management support and commitment for environmental measures as provided by Lozano (2006), Price (2005) and Clarke and Kouri (2009). From the analysis it is clear that there has not been a top-down approach (Burnes, 1996); all of the action has come from the middle and lower down the university hierarchy. This follows the *ad hoc* typology of Spellerberg *et al.* (2004) who identify that this approach is inadequate and it closely relates to By's (2007) 'unconscious' approach to change, which is seen as discontinuous and reactive with a high probability of failure. Clarke and Kouri (2009) also call for a simultaneous top-down and bottom-up approach to campus environmental management (p. 979). The Senior Management Team at Swansea have not identified the need for a change in direction for environmental management implementation, so that any change made will be reactive to the situation (By, 2005). Thus there is an emergent approach to change (Burnes, 2004) with *ad hoc* initiatives by individuals which spread through the university (Hendry and Hope, 1994). Yet these individuals are unable to influence senior management and to gain support, thus the need for an active Environmental Champion (Chrusciel, 2008). Even at this stage of the implementation, in late 2010, there is no evidence of a top-down vision with clear leadership so that those taking responsibility are from the middle management and lower down (Burnes, 2004). Given the opportunity, individuals are gradually changing their behaviours. Recycling is becoming easier with an increased number of recycling bins in offices and around campus and improved information on what and how to recycle waste facilitates the process. The lack of facilities and information have caused frustrations in the past, but better information and opportunities help to create general awareness. The data-collection interview process has been a cathartic exercise for some, enabling them to discuss environmental management issues openly for the first time.

By acting as a brainstorming session, individuals have thought through the environmental issues and have come up with their own ideas as to how to implement low-level measures for energy savings and waste reduction in their teams and departments. This is indicative of the lack of a university-wide strategy and the reliance on individual activity.

The method of choice for communicating environmental management initiatives is through 'all staff' e-mails from the Environment Engineer. This over-reliance on e-mails creates an information-overload for some which results in the e-mails being physically or mentally filtered and being deleted without being read by the recipient. Thus the message contained in the e-mails is not getting through. Only the interested individuals read the e-mails, whilst others admit to filtering or deleting the unread messages. Several interviewees claim that they intended to read the e-mails, but that time restrictions and e-mail overload precludes them from doing so. Due to the absence of any other modes of communication, interested individuals are creating a dialogue between themselves by responding to the e-mails so that a conversation about the environmental issues is created. This highlights the need for improved dialogue between all levels within the university as staff wish to add their opinions to the initial, official e-mail. For some, though, the additional e-mails from individuals confuse the message as they do not know what the 'official' message is and what is being added by others; these additions result in the 'official' message getting lost. However, the direct action taken by the Estates Department appears to have been an effective method of drawing people's attention to energy saving measures in their offices. This direct action took place without prior warning whereby staff were alerted to equipment being left switched on in their offices overnight. This implies

that the more direct, face-to-face communication may well be far more effective than the 'all staff' e-mails for relaying information on environmental management measures. The data shows us that there is an over-reliance on 'all staff' e-mails to provide information, creating a one-way, monologic communication (Waterhouse and Lewis, 2004; Frahm and Brown, 2005). This provides little scope for interaction through dialogue (Lewis, 2007) so that the essential element of change processes, that of communication, is missing (Daly *et al.*, 2003; Lewis, 2007; Thomas *et al.*, 2009). The use of e-mail goes against Sharp (2002) who advocates face-to-face communications as being the most effective means of progressing a change process. There is no communication coming from the University leadership which enforces the communications gap among staff, faculty and management (Clarke and Kouri, 2009; Armenakis and Harris, 2002; DiVirgilio, 2009). Salem (2008) highlights the dual roles of insufficient communications and interpersonal skills during failed change efforts. The importance of internal communications cannot be highlighted enough (Elving, 2005; Daly *et al.*, 2003) as Velazquez *et al.* (2005) point to the lack of communication as the reason for unmet goals. The challenge at Swansea will be to communicate and disseminate the environmental management system throughout the university once it has been set-up, which, as Comm and Mathaisel (2005) propose is the responsibility of the leadership.

Transport is again an issue for staff and students. There is a strong staff cycling lobby which has been pushing for improved, secure bicycle storage facilities since the storage of bicycles in offices has been banned under Health and Safety regulations. Whilst secure storage has been built for staff, some have still suffered from vandalism to their bicycles and consequently many cyclists are unhappy with

the current situation. The Student Union is also pushing for increased bicycle storage for students outside residences on campus. Cyclists are also asking for shower and changing facilities which are provided for in only a few buildings at present. It is felt that the provision of the secure storage and changing facilities will encourage more staff and students to cycle onto campus and help alleviate the car parking problem. Swansea University does not currently offer its staff the financial benefit of the bicycle purchase scheme, which is understood by some to have been blocked by the Finance Department. It is believed that the scheme is being resisted as it would cause additional administration work for Finance staff. If the scheme were in place, then this might encourage current car users to purchase a bicycle and cycle to the university. Car parking space is at a premium on campus, with fees being increased annually. Although there is a car share scheme in place, there are no added incentives to use this; there are no designated car park spaces and the car users pay the full parking fee between them. Thus there is little encouragement to join the scheme. One drawback of the car share scheme is that staff have been late for meetings if they are picked up later than planned, highlighting the problem of a lack of flexibility when using the scheme. Although some staff have changed their routines and do not now use their cars for work, others are adamant that they have no alternative transport option citing the time taken for commuting and family commitments.

The problems surrounding the environmental management system implementation at Swansea University stem from the lack of environmental leadership (Higgs, 2005) at senior level with no commitment to strategy and planning (Su Yol and Seung, 2007; Comm and Mathaisel, 2003; Fisher, 2003). The onus is on middle-management and individuals to implement *ad hoc* initiatives and to push environmental issues

upwards. Environmental management is not seen as a priority for the senior management (Simpson *et al.*, 2004), causing frustrations for those individuals who are eager to implement energy saving and waste reduction initiatives throughout the university. Swansea faces high internal barriers (Post and Altman, 1994) to implementing its environmental management measures, with initiatives being pushed bottom-up as leadership and top management support for environmental initiatives, which are seen to be crucial for success, are currently non-existent (Comm and Mathaisel, 2003; Sammalisto and Brorson, 2008; Shriberg, 2003; Fisher, 2003). This situation results in middle management and individuals taking the lead on implementing environmental management initiatives and for pushing the formal environmental management system to top management. To aid the implementation process, communications as dialogue should be improved in order to engage the whole campus and to provide shared ownership for the process (Daly *et al.*, 2003; Sharp, 2002; Lewis, 2007).

5.5 Case III: Glamorgan University

5.5.1 Background to the University

The main campus for the University of Glamorgan is situated at Treforest, approximately 10 miles (40km) north of Cardiff. The University emerged from the Polytechnic of Wales and was awarded University status on 1st September, 1992, after the Further and Higher Education Act (1992). During 2010 there were a total of 23,990 students, including 17,042 on campus, with approximately 2750 staff. The University of Glamorgan is strategically linked to the Royal Welsh College of Music and Drama, with the Merthyr Tydfil College becoming part of the University in May 2006. The University consists of the following Faculties: Cardiff School of Creative

and Cultural Industries (based in Cardiff); Health, Sport and Science; Advanced Technology; Glamorgan Business School; Humanities and Social Sciences and The Centre for Lifelong Learning. For the purpose of this study, only the main campus at Treforest is referred to. There are adequate transport links to the university with the main campus being situated within ten minutes' walking distance from the train station serviced by frequent trains from Cardiff to the south, along with frequent bus services. The University of Glamorgan has been prominent in the 'Green League' over the last few years. Due to having an environmental management system accredited by the International Organisation for Standardisation (ISO) in place, this forces the University to continually improve its environmental performance. The University was short-listed in the 2009 'Green Gown Awards' in the Residences category for carbon reduction projects in its residences and it also took part in the 2009 benchmarking exercise 'Universities that Count' organised by the Environment Association of Universities and Colleges, achieving one of the overall best results for their climate change activities within the Environment Index.

5.5.2 The Environmental Management System

The implementation of the ISO 14001 standard environmental management system at the University of Glamorgan has been well documented in the journal article written by Trevor Price (2005) of the School of Technology from the University, which forms the basis of some of the information given here. Having been created a University in 1993, the campus was in a poor state of repair and an audit was commissioned by the Board of Directorate to establish how the campus fared with regards to legal compliance and energy and environmental issues. An environmental programme was developed from the audit findings and in 1999, as a result of the

continual environmental improvements, proposals were put forward to the University Directorate to aim for ISO 14001 certification. An Energy Warden was employed during 1999 with the specific remit to minimise energy and water costs, with a budget of £40,000 a year being set for energy and water efficiency measures. With the availability of additional internal funding, an external management company was instructed to expand its annual audit of environmental and energy issues in order to develop the University's environmental management system. This in turn led to the establishment of the Energy and Environmental Management Steering Group in 2000, which directed and advised on the development of the environmental management system and future environmentally-impacting activities. The Energy and Environmental Management Steering Group was set up to be as encompassing as possible comprising staff from the external auditing company, the university Estates department, Accommodation Services and the Student's Union. The Energy and Environmental Management Steering Group soon realised that to gain organisational commitment towards ISO 14001 accreditation, it was necessary to target members of staff who were most likely to share their views. The Energy and Environmental Management Steering Group developed an environmental policy statement for the University which was supported by the University Directorate and signed by the Vice-Chancellor. This was an important first step as it showed commitment towards the aims of the policy from senior University management. A five year plan was set up in order to implement the necessary work. The University of Glamorgan was the first university in the UK to gain ISO 14001 across the whole organisation, being accredited in 2002. In 2004, Glamorgan achieved the new standard ISO14001-2004. At the time of the research in 2009, the Energy and Environmental Management Steering Group comprised staff and students meeting every three months, being part

of the University's management structure and playing a vital role in driving the environmental management system forward. There is also a system of having an Energy Representative for each department who feeds ideas and information into the Energy and Environmental Management Steering Group meetings and then from the Energy and Environmental Management Steering Group meetings back into the departments for implementation. The Estates department has a budget of £50,000 for energy initiatives, but does not have a budget for waste management or recycling. For any funds spent on energy saving initiatives it needs to be proved that the payback period will be within five years. With regards to waste management, the objective is to reduce down to zero waste sent to landfill. Recycling has increased and waste sent to landfill is being reduced year-on-year in line with the ISO 14001 requirement for ongoing improvements. Currently all plastic bottles from the recycling bins on campus are shredded into small chips which are then used on the woodland pathways instead of being sent for recycling. The University runs a successful car sharing scheme for staff which, in 2009, was over-subscribed by around 60 teams. The popularity of the scheme is partly due to the dedicated car parking spaces for car-share cars, which means that staff are able to park easily whatever time they need to arrive for work, and also because of the reduced car parking fees.

5.5.2.1 Environmental Policy

The University's Environmental Policy Statement emphasises that in order to be environmentally responsible, the University's actions should comply with the relevant environmental legislation and that everyone within the University has to share in this responsibility. The Statement confirms that the University has set up a

formal environmental management system which demonstrates its commitment to the environment and that an Environmental Handbook has been produced so that everyone within the University should know how to contribute to the care of the environment. The document also states that an annual environmental audit has been implemented to ensure that the environmental policy is kept up to date. The Environmental Policy Statement is supplemented by other specific documents including the Travel Plan, Waste Recycling and the Environmental Information Guide.¹¹

5.5.3 Environmental Management System in Practice

Glamorgan University gained ISO 14001 certification for its environmental management system in 2002. With this in mind, my expectation was that the environmental management system would encompass the workings of the university and impact on the work of those within the University as a management system. However, the application of the environmental management system at Glamorgan reflects Sadgrove (1992) in that the management system has been implemented and the Policy written, but inaction has followed with regards to putting this into practice. Sheldon and Yoxon (2002) tell us that the Environmental Policy is the cornerstone of the environmental management system, but interviewees tell me at Glamorgan that the Policy is not yet 'fully articulated' (Norman, Dean of School). The Policy has laid down the targets and objectives (Netherwood, in Welford, 2001) but these are not being adhered to through lack of environmental management system implementation throughout the University. A management system refers to how an organisation manages its activities to meet set objectives and at Glamorgan,

¹¹ The Environment Policy is available at <http://profile.glam.ac.uk/policy/environment>

environmental management objectives have been set in the Environmental Policy. The environmental management system is supposed to ensure the operation of the Policy, yet this is not happening which implies that there are problems with putting the Policy into practice.

From those charged with implementing the environmental management system measures, the perception is that there is support from the Directorate but that this is not overt. The initial decision was taken by the Directorate to implement the environmental management system and apply for certification, but since this time leadership and senior management interest has waned. There is an awareness amongst some interviewees of a strong emergent element (Dawson, 2003) to the environmental strategy with only some strategic planning, but this is becoming more top-down due to the competition factor that now exists between universities (Burnes, 1996; By *et al.*, 2008). The Directorate is seen to be becoming more interested in the competitive advantage to be gained from differentiating Glamorgan from other universities with regards to environmental management. Middle managers interviewed express the view that despite the lack of overt interest, the environmental management system is not just a 'paper exercise' and that there is a 'willingness to take a coherent approach' (Norman, Dean of School). However, the Environmental Policy is said to be 'not fully articulated' (Norman, Dean of School), which promotes the view that although there is an official Environmental Policy it is not being implemented in full throughout the University. The perception of interviewees is that the environmental management system is not being enforced and that many environmental measures are instigated and implemented on a voluntary basis. Interviewees state that there is no environmental leadership and that there needs to be

more 'senior management buy-in' (Terry, Head of Doctoral Programmes). It is also revealed that environmental management issues are not raised during School strategy meetings as a matter of course.

The main impetus for implementing the measures comes from the Estates Department, which, despite a lack of funding, is always looking for new initiatives. The initial cost and pay-back time are a major factor for both small-scale and large-scale initiatives which hinders implementation. These factors are imposed by the Directorate despite the need for continuous improvement under the concept of the environmental management system. This causes frustrations for the Estates Department as they fail to benefit from opportunities to do more. However, the need for cost savings through reduced energy and resource use is appreciated by other staff in order to have funds available for other uses in the University (Clarke and Kouri, 2009; Comm and Mathaisel, 2005). To put the environmental management system into practice there now needs to be a dedicated senior Environmental Champion whose top priority is the environment, and one who has influence over managerial peers and support from Directorate (Egri and Herman, 2000; Ramus and Steger, 2000). The Directorate now needs to show strong leadership and vision to promote the environmental management system programme (Alshuwaikhath and Abubakar, 2008; Comm and Mathaisel, 2005; Sharp, 2002). Whilst the work of the Estates Department is widely recognised, individuals and 'enthusiastic amateurs' (Terry, Head of Doctoral Programmes) are also active in implementing initiatives. The Student Union has initiated the use of internet-based voting for Union elections which reduces the use of paper ballots and the student newspaper is now printed on recycled paper. The Student Union is also proactive on recycling and reusing

resources. However, there is the notion that students are not given enough information regarding how and what to recycle and that there are insufficient facilities for them on campus. Student interviewees state that the onus is put on students to find out about recycling instead of the University pushing and facilitating this activity. Other interviewees comment that initiatives are 'department-specific' (Vicky, Lecturer) and that measures are only put in place because they are driven by individuals. The way in which some departments are run is based on their own values and beliefs, which include creating a minimal environmental impact. The Estates Department has instigated double-sided printing and copying as standard throughout the University, but has had less success with changing other behaviours such as turning lights and computers off when not in use as this change is reliant on individuals themselves. Yet such small measures are deemed important by many of the interviewees. Dahle and Neumayer (2001) highlight the prevailing 'campus culture' (p. 153) which acts as a predictor to behaviours and which impacts on the ability to adopt and change behaviours, and the difficulties in changing culture (Stephens and Graham, 2010). Lozano (2006) identifies that bringing about this type of change is a slow process, but with the environmental management system now being in existence since 2002 there is still too much reliance on individuals and 'enthusiastic amateurs' (Terry, Head of Doctoral Programmes) through an emergent strategy. Senior management involvement is vital as the level of environmental success is said to depend on the response to environmental goals and policies set by management (Henriques and Sadorsky, 2006).

Formal communication of environmental initiatives is via several methods, including the Environmental Representatives Network, the Environmental Handbook, a leaflet

and the quarterly newsletter which are all provided by Estates. Each department has a Representative which feeds into the Network, yet despite this none of the interviewees knew of their representative, had gained any feedback from the Network or had read the newsletter or leaflet. This raises the question as to how staff and students are to become aware of new and existing measures. One group which is highlighted are the longer-term staff who started before the staff inductions included the environmental content. These staff have 'picked up' initiatives along the way without formal training, and yet they are relied on by new staff and others to pass on environmental procedures exactly because they have been at the University for a long time. In fairness, the Estates Team are aware of this problem and are finding ways to provide information and training to long-term staff. This reveals that although the Estates Department is working hard to communicate the environmental management system measures, these are somehow not disseminating throughout the University. This problem could be related to the fact that the environmental management system is not a priority for senior management. Although the Estates Department is working hard to implement new initiatives, to put these into everyday practice requires more effective communication. The environmental management system is included in the induction process for new staff, but as yet information regarding environmental management system initiatives is not being disseminated throughout the University for others to be aware of. Armenakis and Harris (2002), By (2007) and Klarner *et al.* (2008) all propose good communication to aid the dissemination process. Although the Estates Department have provided much useful information in leaflets and the Handbook for guidance, they are still not communicating with their audience. What they have created is very much a monologue without interaction (Russ, 2008; Lewis, 2007) yet face-to-face

communication is required for successful campus initiatives (Sharp, 2002). The inductions and the Environmental Representative Network provide opportunities for dialogue but this is only impacting on a small number of staff and students. There therefore needs to be the opportunity to create dialogue throughout the University (Elving, 2005). This discussion highlights the challenge of communications for University leadership (Allen *et al.*, 2007) given the lack of opportunities for dialogue to take place, contrary to the importance of dialogue for change processes highlighted in the management literature.

Whilst international links are important to the University there is concern about the impact on the environment from international travel undertaken by academic staff for lectures and conferences. However, video links are under consideration so that lectures and meetings can be undertaken with less international travel. Local travel to and from the University is becoming less problematic, with improved train services and a dedicated park and ride scheme. Yet despite the popular car share scheme there are still issues of car parking on campus for those who drive. There is also an issue for those driving within the rush hour period as many staff are entitled to work flexible hours, but with meetings being scheduled for 9 o'clock staff have to travel within the busier times. Being in a more rural setting than Cardiff University, staff and students at Glamorgan have fewer options of using public transport so that driving and car parking will remain problematic for many.

The impression at Glamorgan is of a team of dedicated staff in the Estates Department working hard to implement and improve environmental measures, but that the environmental management system does not disseminate throughout the

University as an all-encompassing management system. Individuals are still needing to be proactive to implement department-specific initiatives. Despite the initial impetus from the Directorate to implement the environmental management system and to gain ISO 14001 certification, since this time there has been a strong emergent approach with less strategic planning of environmental management. However, this situation is changing due to the renewed interest of some senior management in the competitive advantage to be gained from highlighting the University's environmental credentials.

Despite the fact that the environmental management system would not have been implemented without initial Directorate support, the researcher finds evidence of leadership interest waning resulting in the lack of environmental strategic direction and an emergent strategy which has developed due to the lack of leadership commitment. With this in mind, Christmann (2000), Comm and Mathaisel (2003) and Clarke and Kouri (2009) all highlight the need for senior management commitment. I have identified that initial senior management interest has declined which has in turn led to environmental management not being at the forefront of University strategy. Contrary to Russo and Harrison (2005), management at Glamorgan seem to have been treating the environmental management system as a separate entity as opposed to an integrated, cross-functional activity. It seems that gaining the environmental management system has 'ticked a box' but has then been disregarded for future strategic planning purposes. This situation could be rectified by the whole-systems approach advocated by Koester *et al.* (2006) which would encompass the academic, administrative and facilities management and bring these conflicting areas together. This indicates that there has not been the development of

an environmental culture (Halme, 2002) throughout the lifetime of the environmental management system; only pockets of initiatives have flourished, despite the hard work of the Estates Department. In this respect the approach to implementation seems to be both planned and emergent (Burnes, 2004), whereby the Directorate instigated the environmental management system (planned) but that putting this into practice is reliant on individuals (emergent) strategy. Yet this approach does support Velazquez *et al.* (2006) who put forward the concept of incremental and continuous improvements. From those interviewed, staff at lower levels do not seem engaged with the environmental management system and they are not encouraged to engage (Halme, 2002), whilst only those interested individuals implement environmental management practices. This relates to a combined planned and emergent change which Biedenbach and Soderholm (2008) advocate as beneficial, and that a mixed bottom-up and top-down approach creates a positive change management environment (By *et al.*, 2008). Sharp (2002) points to the inherent nature of universities which necessitates a large number of people to establish new routines and not to be reliant solely on a change programme. Yet there still needs to be transformational leadership (Klarner *et al.*, 2008) to push the environmental management system and to gain commitment for this process. One important aspect of this process is to create transparency and communicate throughout the organisation.

The fundamental idea of an environmental management system is that it is a working management system which pervades throughout the whole organisation (as discussed in Chapter 2). Although Glamorgan has a fully certified environmental management system I do not see evidence of this being disseminated throughout the University

and impacting on decision-making in all areas. The environmental management system should be a cross-cutting system, yet there are staff and students who are unaware of it or unaffected by it. This discussion reveals that the failure to disseminate the environmental management system comes from not having a senior Environmental Champion to push environmental management, along with a lack of communications dialogue from leadership. This failure of the leadership to put the environmental management system into operation is in line with the management literature (Higgs, 2005; Comm and Mathaisel, 2005; Daly *et al.*, 2003; Elving, 2005).

5.6 Case IV: Swansea Metropolitan University

5.6.1 Background to the University

Swansea Metropolitan University is the smallest and newest university in the study. In 2009 it had approximately 6000 students and 600 staff split over four sites in and around Swansea city centre. The University was created in January 2008 from the Swansea Institute of Higher Education and includes the three Faculties of Applied Design and Engineering, Art and Design and Humanities. Being within the city it has good road and bus links, and three of the sites are around fifteen minutes' walk from the train station. However, the fourth site is more easily accessible by car.

5.6.2 Environmental Management Initiatives

The Environment Manager was appointed in 2000 and holds the Environmental budget for use on energy, water and waste initiatives. However, the Estates Department holds overall responsibility for environmental matters at the University. Swansea Metropolitan has a Sustainability Committee which encompasses Health and Safety issues with environmental issues. There is also a plan to set up a

Sustainability Forum (along the lines of Swansea University) for staff and students, which would meet around three times a year. The Environment Manager conducts training and induction sessions for staff and students on an annual basis with regards to energy saving measures, recycling and transport issues. There is also a popular car sharing scheme for staff who benefit from allocated parking spaces on campus. Under the South West Wales Higher Education Partnership, Swansea Metropolitan is working closely with Swansea University and the smaller Trinity University College in Carmarthen to implement an environmental management system to the ISO 14001 standard. To minimise costs and administration for the Partnership, the waste management contract was negotiated by the Environment Engineer from Swansea University on behalf of all three universities. The current plan is that Swansea Metropolitan will replicate the ISO 14001 environmental management system once it has been implemented by Swansea University. As well as working with Swansea University towards an environmental management system, in March 2010 Swansea Metropolitan was awarded the Green Dragon Environmental Award Level 3 for its environmental management. The University has also performed consistently well in the 'Green League'. Although there is not a formal environmental management system currently in place there are many projects to reduce energy use, reduce waste and increase recycling which are initiated by the Environment Manager. The University was short-listed for the 2009 'Green Gown Awards' in the Carbon Reduction category for meeting its carbon commitments and also took part in the 'Universities That Count' benchmarking exercise, receiving one of the highest placements for strategy within the Environment Index. Swansea Metropolitan won the Wales Business and Sustainability Award 2008 for Environmental Reporting and provides extensive information to staff, students and visitors through publishing an

annual sustainability report and has also achieved Fairtrade status (HEFCW News, January 2009). Overall, the University places great emphasis on promoting its environmental initiatives both on a local and national level.

5.6.2.1 Environmental Policy

The University has written policies on the Environment, Waste Management and Energy and Water. The Environmental Policy states that the University will strive to implement and promote good practice by intensifying its commitment to the efficient management and conservation of all forms of energy and gradually switching to the use of more energy efficient systems; by minimising waste, promoting recycling and encouraging the sustainable use of resources; and by encouraging staff and students to reduce the impact of their travel to the University and to promote awareness and understanding of local and global environmental issues. The Policy also states that the University will disseminate good environmental practice, promote research into environmental issues and encourage the incorporation of environmental matters in its curricula where relevant.¹²

5.6.3 Environmental Management in Practice

The overall feeling from Swansea Metropolitan is of a confident and positive young University. Possibly due to its small size, there appears to be good communication of and a general knowledge of the environmental management measures in place, with an awareness of those in charge of implementing the initiatives. Whilst there is no mention of the University being in competition with others for students and funding, there is some evidence of underlying tension between Swansea Metropolitan and

¹² The written policies are available at www.smu.ac.uk/index.php/university/sustainability

Swansea University. This comes from Swansea Metropolitan now being on an equal footing with Swansea as a *bona fide* University.

The Vice-Chancellor is seen to be politically astute and is keen to promote the University in a positive image through its environmental management initiatives. The 'Green League' and other environmental awards are actively sought out by the University for positive publicity and an annual internal prize is given to those staff designated as Environmental Champions by their peers. These prizes are given out at an award ceremony by the Vice-Chancellor in person. Because of this there is a general feeling that the environment is 'a lot higher on the agenda' (Rachael, Lecturer), yet it can also be said that the Vice-Chancellor is responding to external pressures rather than placing environmental management at the forefront of University policy. Having said this, the Vice-Chancellor is credited for having a genuine personal interest and for driving such measures. Despite pushing ahead with environmental measures, interviewees also noted that the University is run on economic, business grounds so that cost savings are an important outcome of implementing environmental management initiatives. This is not construed as a detriment as staff are aware of the need to save costs to enable expenditure elsewhere in the University (Comm and Mathaisel, 2005; Christman, 2000). The environmental management initiatives are spearheaded by the Built Environment Department and in particular the Environment Manager, and strongly supported by the Vice-Chancellor. The Environment Manager is well known throughout the University as the driving force and the person to contact with queries about any of the initiatives. The Environment Manager employs an autocratic leadership style and is seen as the 'lone voice' (Richard, Senior Lecturer) and a 'crusader' (Elaine, Secretary), but with green

issues becoming more main-stream her desire to get initiatives implemented has become more accepted by staff and students. However, the forceful manner in which some staff have been spoken to in the past regards turning off lights and computers and the use of printers and photocopiers has left a feeling of resentment with what they are being asked (told) to do. But this sentiment does now seem to have passed as staff are becoming more aware themselves of the importance of energy saving and waste reduction initiatives. The important aspect is that the Environment Manager is the appointed Environmental Champion who is supported by management and the Vice-Chancellor (following Comm and Mathaisel, 2003; Sammalisto and Brorson, 2008; Shriberg, 2003; Fisher, 2003). The Vice-Chancellor appears to show a personal interest, as well as a business interest, in pushing environmental management leading to a proactive approach as discussed in Hanson *et al.* (2004) and Le Pochat *et al.* (2007). Yet interviewees comment that perhaps the Vice-Chancellor is also being led by economic reasoning into environmental management implementation as he is 'politically astute' (Mathew, Senior Lecturer) and the University would therefore gain benefits through resource efficiencies (Dyllick and Hamschmidt, 2000) and cost savings (Christmann, 2000; Clarke and Kouri, 2009). The data reveal that the University seeks to enhance its reputation through publicising its environmental achievements (Studer *et al.*, 2006), although the initiatives implemented to date are the easier 'low hanging fruit' (Kurzinger, 2004:246) which are low or no cost options.

Most of the communication regarding initiatives comes from the Environment Manager in the form of 'all staff' e-mails, posters, notices, staff and student inductions and the annual talk at the Staff Development Day. Although there is the

perennial problem of e-mail overload, staff interviewees recall the information contained in the e-mails and the information contained in the posters on the Environmental Notice board which has helped to highlight the discourse of environmental management, enabling some to change their behaviours at home and work. However, there is little opportunity for face-to-face dialogue, contrary to Sharp (2002), who states that this is the most effective means of communication and there is no Environment Network to create a two-way method to gain and disseminate information. Following Marans and Edelstein (2010) there are good communications from posters and internal media to promote environmental behaviours, along with inductions and talks (Price, 2005) given by the Environment Manager. Overall, the data suggest that the transmission of information is monologic with no dialogue to engage staff and students. The communication is in the form of blanket messages (Lewis *et al.*, 2001, in Lewis, 2007) with no possibility of staff and students being able to participate (Lewis, 2007). Clarke and Kouri (2009) highlight the problems of these communications gaps amongst staff, students, faculty and management for implementing environmental management initiatives.

Although there is some evidence of individuals instigating their own initiatives, the wider view is that nothing would get done without the Environment Manager's intervention and that there is no delegation down to others. Therefore the onus is on the Environment Manager as individuals are not encouraged to get involved and, as such, this is a precarious example of a workable and sustainable system of implementation. The Environment Manager employs an autocratic style of implementing and integrating measures into the University. Carnall (2003) denotes an autocratic manager as one who issues orders and assumes people need direction

and control, which is reflected in the data. The data tell us that the Environment Manager has a forceful style of telling people to turn off lights to save energy, for example, but that she also leads by example. Environmental behaviour is being rewarded through free gifts and the internal Environmental Awards (Carnall, 2003:127). This autocratic behaviour follows the findings of Angus-Leppan *et al.* (2010b) whose study of corporate social responsibility finds that an autocratic leadership style is linked to the successful implementation of explicit (strategic) social responsibility programmes. Overall, the environmental measures and the Environment Policy are not overtly enforced and are left to being taken up on a voluntary basis. The initiatives are not followed up with 'vigour' (Mathew, Senior Lecturer), but the more voluntary implementation is seen by informants as being the acceptable way to progress. Over the last few years, the environmental measures have been given more prominence throughout the University. Yet where there has been official implementation of measures, this has resulted in some ambivalent responses (Piderit, 2000; Plambeck and Weber, 2010) as the following example shows. In the past, staff members have had access to printers in their offices whereas recently networked printer / photocopiers have been installed on each floor for general use. Initially staff were concerned about a lack of confidentiality due to anyone walking past the printer being able to pick up what had been printed. However, this potential problem does not seem to have occurred. Despite this, some interviewees are still using their individual printers which are paid for by themselves which they say saves them time picking up their printing. The networked printers were brought in as a paper-saving initiative, yet interviewees are dubious as they are not sure whether this is an environmental or a cost-saving measure by the University. However, interviewees are in agreement that the new printers are beneficial in that

they print double-sided without becoming jammed. Following Piderit (2000) and Plambeck and Weber (2010) this situation reveals a simultaneous positive and negative response to the printers by some interviewees.

Transport to and from the University is an issue for some staff yet others have changed their behaviours to become more environmentally friendly. Some have switched to using train services whilst others have switched to cycling and have saved themselves money by selling their cars in the process. Using public transport and cycling are promoted within the University and incentives are given to staff to do so, and the new, secure bike sheds have been well-received. The University runs a successful car-share scheme which has a number of dedicated car parking spaces on campus allocated to its members. However, car parking is limited on campus so that those not in the scheme feel pressured into arriving early to get a space. There is currently no charge for parking on campus but there are plans to start charging a fee. This is being promoted as an environmentally beneficial scheme to cut the number of cars in use, but some interviewees are aware of the University's need to raise funds and feel that this is purely a revenue-raising exercise. Respondents note that there could be a loss of goodwill between staff and the University if charges are brought in to effect, forcing staff to use alternative modes of transport. Despite its location near to the train station, some interviewees feel they need more flexibility from the train services to fit with their work schedules, especially those who work late into the evenings. Others note the problems of cycling due to the dangerous road conditions and the severe hills in the area, which are not conducive to cycling. Again, this situation reveals ambivalent, simultaneous positive and negative responses to transport issues following Plambeck and Weber (2010). The issue of commuting to

work also raises the mix of cognitive and emotional responses (Piderit, 2000); interviewees relate to the need for the University to raise funds through car park charges, yet they also feel pressured into arriving early to get a car park space or to use inflexible train services.

Despite some staff and students changing their behaviours, it is clear that there is no delegation of responsibility through the University; instead, people follow what they are told to do by the Environment Manager. This shows a lack of engagement which Christensen *et al.* (2010), Clarke and Kouri (2009) and Marans and Edelstein (2010) propose is needed to engage the whole campus. There is no Environment Network or consultation for generating ideas (Wright, 2006) and consequently no shared ownership (Halme, 2002). However, with the number of initiatives which have already been put in place, the University has made incremental and continuous improvements as supported by Velazquez *et al.* (2006). Possibly due to the Environment Manager's actions there is little sense of individual initiatives within the data. Despite being beneficial, a simultaneous top-down and bottom-up approach to implementation does not exist (Post and Altman, 1992, in Welford, 1997; By, Diefenbach and Klarner, 2008; Clarke and Kouri, 2009). Swansea Metropolitan is a dynamic University which is reflected in the progressive nature of implementing and publicising its environmental management initiatives. The Environment Manager is a significant driving force, supported by the Vice-Chancellor. Due to its relatively small size, the Environment Manager is able to influence and control environmental behaviours at the University, through an autocratic leadership style, with the support of the senior management. The Vice-Chancellor is seen by staff to be supportive and personally interested in the environmental initiatives but that publicity and 'green'

credentials are also deemed important for enhancing the reputation of the University. The absence of any bottom-up approach could hinder the process as individuals do not have the opportunity to engage. The initiatives so far are relatively low cost and easy to implement; the 'low hanging fruit' (Kurzinger, 2004:246) and have, for the most part, been on a voluntary basis and not enforced. Enforcement of using the networked printers resulted in some resistance through individuals keeping their personal printers and the potential car parking fees are a concern to some car users.

5.7 Summary

This Chapter provides a discussion of the first-level analysis of the interview data, revealing the seven pertinent organisational themes of Environmental Management System implementation, Environment Champion, Proactive Leadership, Individual Actions, Top Management support, Competition with other universities and the Importance of a 'green' image. This first-level analysis of the data informs the analysis of individual sensemaking of environmental management discussed in Chapters Six and Seven. The discussion in this chapter reveals the complexities within universities regarding the successful implementation of environmental management initiatives and environmental management systems. The four case studies are all at different stages of implementation with each case having its own style of managing the process, yet the leadership of each university needs to recognise that they have to take into account their own complexities, management style and approach to be successful (Salauroo and Burnes, 1998). This discussion highlights there is no 'one best way' (Burnes, 1996) but points to the important role of leadership and an Environmental Champion to lead and engage the whole campus in the process (Higgs, 2009; Wright, 2006); commitment from leadership and senior

management (Christensen *et al.*, 2010; Clarke and Kouri, 2009; Marans and Edelstein, 2010; Christmann, 2000) and the formula of simultaneous top-down and bottom-up interest (Post and Altman, 1992; Clarke and Kouri, 2009). The importance of dialogic communication to provide clear information in order to reduce ambiguity and uncertainty (Allen *et al.*, 2007) is revealed here, as these concepts are shown to lead to ambivalence towards change processes (Piderit, 2000; Plambeck and Weber, 2010). Overall, this Chapter highlights the problematic issues for university leadership of introducing environmental management to universities in Wales.

Chapter 6: Making sense of Environmental Management within Old Universities

6.1 Introduction

Sensemaking "...involves the ongoing retrospective development of plausible images that rationalise what people are doing", it is "...about the interplay of action and interpretation" (Weick *et al.*, 2005: p. 409).

This Chapter discusses individual sensemaking of the processes to implement environmental management initiatives within the old (pre-1992) universities of Cardiff and Swansea. In line with Angus-Leppan *et al.* (2010a) sensemaking theory is applied in this research to help understand the causes of ambiguity and uncertainty surrounding the processes to implement environmental management initiatives. The sensemaking of individuals reveals their stories of environmental management through their experiences. As such, sensemaking is not shared and is not accurate, being linked to the identity of the individual as a student, academic or staff member. The data discussed in this Chapter includes both interview extracts and images. The interview extracts provide specific examples of ambivalence and organisational cynicism towards environmental management through individual sensemaking. Individuals retrospectively relate their views and understanding of the processes to implement environmental management initiatives; discovering their ambiguous understanding and their uncertainty of the process which trigger sensemaking. The images highlight the use of metaphor and symbols as a means to create understanding, aiding member's sensemaking of change events in organisations (Barner, 2008; Gioia *et al.*, 1994).

Before the introduction of 'new managerialism' (Deem, 2005), the management of these two universities was based on a collegiate system of governance with

academics enjoying a high degree of autonomy. However, external pressures for change to become more accountable have seen the trend of moving away from collegiality to decisions being taken by separate management (Dearlove, 1998). This managerial trend has led to more power in the hands of Vice-Chancellors (Dearlove, 1998). Whilst Vice-Chancellors are claiming to be engaged in strategic activities, some research suggests they are reactive and fire-fighting (Borgh *et al.*, 2000, in Deem 2005:225) and that leadership from them is missing (Dearlove, 1998; 2002). With universities being conservative towards change, Dearlove (1998; 2002) points to the importance for Vice-Chancellors to generate support from Deans and Heads of Departments for change initiatives such as the implementation of environmental management discussed in this thesis.

The data in this research show that individual members rely on personal contacts within the universities to reduce their lack of clarity of situations, whilst uncertainty occurs as official information is either missing or poorly communicated. This research therefore contributes to the knowledge of individual sensemaking within universities through the insights into perceptions of environmental management implementation and practice in Welsh universities. Using the following interview extracts and visual drawings I discuss the sensemaking of the interviewees based on what they perceive is happening with regards to the implementation and practice of environmental management in their universities through their retrospective accounts. In addition to the ambiguity and uncertainty highlighted, interpretation of the data reveals the themes of ambivalence and resistance as responses to environmental management initiatives. Piderit (2000:784) makes the important observation that much of the research on resistance to change is taken from the view of those in

charge. However, in this research the perceptions are of those who are at middle manager level or below.

In this research, Roger (Middle manager, Cardiff University) shows conflicting cognitive and emotional responses to implementing the use of recycled paper in photocopiers whereby he accepts the emotional, moral view to using this paper yet his cognitive, management role dictates that non-recycled paper is used. Campbell (1965) describes ambivalence as 'the optimal compromise' (cited in Weick, 2001:377) whereby a balance of knowledge and ignorance is applied to a situation, or similarly where a 'yes' and 'no' answer is given to a question. The research data also highlights ambivalent responses to environmental management by university leadership. Tom (Senior Lecturer, Swansea) reveals that the University places importance on environmental research yet fails to implement environmental management measures, whilst Susan (Middle Manager, Cardiff) states that senior staff members now chair the Sustainability Group but that environmental management measures are not enforced in practice. The importance of recognising ambivalence within sensemaking is highlighted by Plambeck and Weber (2010) who propose that ambivalent evaluations of issues by organisational leaders affect strategy processes and organisational outcomes. In this regard Moon (2009) points to the problem of ambivalence towards change initiatives, proposing that increased interest and buy-in to change programmes minimises ambivalence towards change.

The cynicism revealed in this research can be construed as both organisational and change-specific. Helen (Lecturer, Cardiff) reveals her negative feelings for her employer when she talks about the University being run as a business which only

takes account of its own interests, whilst Eric (Finance Department, Swansea) shows his frustration and disillusion towards the slow progress of environmental management implementation because of the lack of leadership. Change-specific cynicism manifests in this research as the 'pessimistic viewpoint' towards those responsible in line with Wanous *et al.*, (2000:133). As Darren (PhD Researcher, Cardiff) states:

“I think part of the problem with universities and big institutions is you get old fogies stuck in high places who aren't necessarily responsive to change”.

It is important to note here that resistance in any form is not the sole domain of employees lower down in the organisation (Piderit, 2000). Dunphy *et al.* (2007) point to senior executives who are often as resistant to change as other organisational members, whilst Rubin *et al.* (2009) find that leadership cynicism about organisational change negatively influences outcomes. This research reveals perceptions of leadership resistance from Stewart (Department Head, Swansea) who notes that there should be more initiatives throughout the University, following a strategy and business plans, but that nobody is driving this at present. Dunphy *et al.* (2007) make the observation that:

“...most people resist change when others are attempting to change them; few do when they feel that they are in charge of change” (p. 306).

Clegg (1989:192) proposes the concept of transitive power to secure outcomes whereby one person seeks to get another to do something they would not otherwise do. In this research, Susan (Assistant Director, Cardiff) describes how she reverts to preaching and nagging to others to get her message across as she does not hold transitive power over others to enforce environmental initiatives, whilst Eric (Finance Department, Swansea) also lacks transitive power to enforce environmental

initiatives as he can presently only encourage people to consider environmental aspects. The complexity of the relationship between organisations and cynicism is taken further by Gabriel (2005:210) who proposes that it is the resentment of a lack of managerial power and the dependence on others for power which promotes cynicism. In this regard, Roger's (School Director of Administration, Cardiff) cynicism could be related to the fact that he resents his lack of power over Central Administration Departments and School academics. He states that the Schools would have to put a lot of effort into reducing energy use and costs, yet the financial benefit would currently go to Central Departments. Roger states that he would engage if his School received the benefit, but he cannot enforce this at present.

In this research, Susan at Cardiff is a middle manager who is tasked with implementing environmental strategy from senior management, whilst Stewart (Swansea) is shaping change within his own department without senior management input. Dopson and Stewart (1990) relate to the complexities facing middle managers in that they cope with conflicting expectations from those above and below them in the organisation. Roger (Cardiff) highlights this situation in his drawing by showing that he is 'stuck in middle' between Central Administration and academics. Roger and Susan epitomise the role of middle management (Dickson, 1977, cited in Dopson and Stewart, 1990) in that they react to strategy through managing procedures yet they lack influence on major decisions.

This Chapter highlights several themes from the data to analyse ambiguity, ambivalence, cynicism and leadership and commitment from senior managers towards environmental management initiatives. For this analysis I have chosen four

individuals from each of the four universities under the study, a process in line with the cross-case pattern searching of Eisenhardt (1989) discussed in Chapter Five. The individuals provide a diverse sample of middle managers, academics, staff and students. Extracts have been selected from each of their interviews and drawings are included to provide examples of individual sensemaking with regards to environmental management initiatives. The drawings as visual metaphors provide a way for individuals to interpret and make sense of their experiences of environmental management (Barner, 2008; Gioia *et al.*, 1994). Acceptance of a new reality is said to be assisted by sensemaking and symbolism, with the use of metaphor to give ‘meaning’ (Gioia *et al.*, 1994:365). The discussion begins with Cardiff University.

6.2 Cardiff University

The four individuals below have been selected from the nine interviews completed at Cardiff and comprise two middle managers, Roger, School Director of Administration, and Susan, Assistant Director for Environment Safety, who is heavily involved in the environmental management system implementation; one lecturer, Helen, and Darren who is a PhD student.

6.2.1 Roger, ‘Stuck in the middle’

Roger is the Director of Administration for one of the larger Schools at Cardiff, having responsibility for 50 support staff and all of the operational functions. He does not have line management to the academics in the School but has responsibility for policies which impact on their working lives. Roger has a PhD and has been at the University for eleven years. He was previously part of the Eco Champions

Network, but has since passed this role on to others in the School. The School currently has two Eco Champions due to its size.

Extract 1:

"In the current financial model the costs for heating and lighting are paid for centrally, that's how the allocation model works so for schools work to reduce energy it would have no effect on the bottom line, although that's not the only reason for doing these activities but it is a motivator and with energy prices rising it would be more motivating. It shouldn't all be about money but it is an important factor. Particularly as it's the school that has to put all the effort in and the central university gets the benefit. You need to get something back otherwise why would we engage, what would be in it for us - apart from saving the planet?! In terms of the overall business school thinking the environment is very low - there are so many other things to do on different fronts. It has to be said that saving the planet is unfortunately way down there not to say we don't bother in some ways".

Extract 2:

"The Eco Champions forum was formed I think 3 years ago. But a lot of it is left up to individuals and individual schools. So for instance we could buy recycled paper rather than normal paper for photocopying we currently don't because it messes up the copiers and it's more expensive. The former being far more important as we don't want our copiers not to work. We've experimented and maybe now the paper is very good, but there are only so many hours in the day..."

Extract 3:

"The 'initiative' (EMS) is being led by the university. As for what people actually do it's largely voluntary. What schools do is voluntary - entirely voluntary".

Extract 4:

Interviewer ~ Do you personally support the environmental initiatives?

Roger ~ "yes absolutely. At work I have 2 hats - one as a human being and one as a management role which is more about money. So as a human being it would be nice if everything was done but I do understand there are limitations. That's why we don't use recycled paper because we'd jam all our copiers if we used it. Regardless of whether I think we should or shouldn't use it - it was an operational issue and it didn't work".

Extract 5:

"The cynic in me would say that we have an environment policy because we're expected to – I would imagine all universities have an environment policy and they would all probably look very much the same. Currently there's no threat of imposition. Sometimes though if you're in school management you feel things should be imposed – the university is doing this & we just have to comply. If it's left as a voluntary measure, then well..."

Extract 6:

Interviewer ~ Do you think the School is proactive with regards to the environment?

Roger ~ "No it would be unfair to say that. I think the things that would make a real difference would require a huge culture change – turning off computers and lights are down to individuals".

The individual Schools at Cardiff have autonomy on how to respond to implementing environmental management initiatives. Roger tells us there is currently 'no threat of imposition' and that implementation is 'entirely voluntary' within the University and that he chooses not to implement certain measures based on economic reasons. Here, Roger alludes to the cost drivers (Christmann, 2000; Comm and Mathaisel, 2003) for reducing energy use by the School in Extract 1.

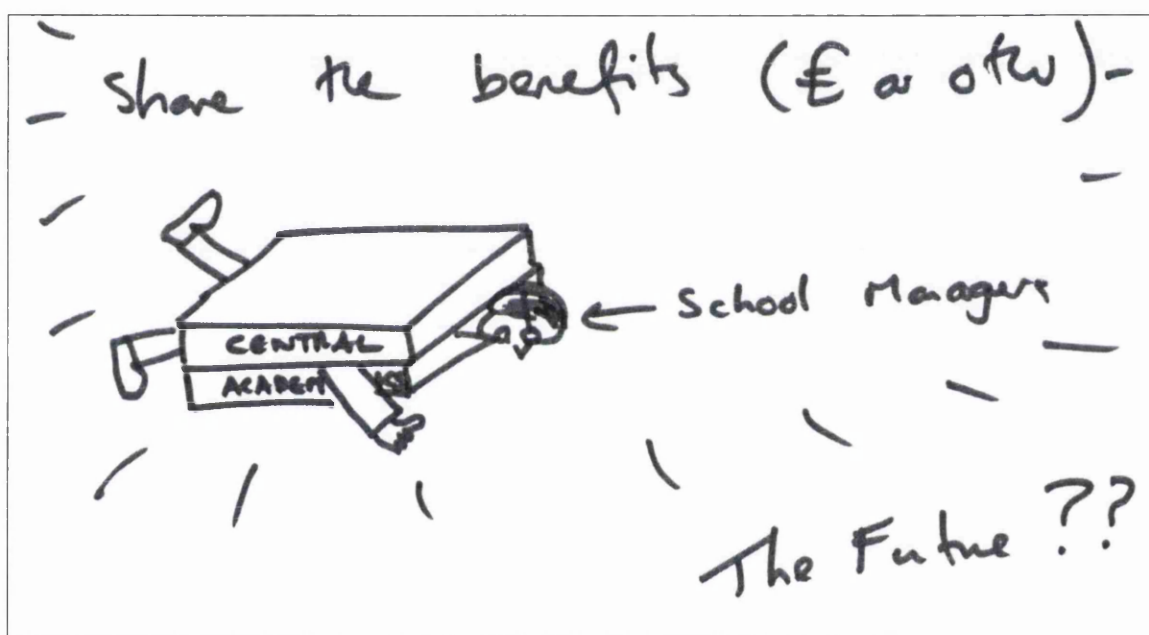
As a middle manager Roger is the recipient of strategy from senior management and as such is able to influence the outcomes of strategy in the absence of leadership (Balogun, 2006) through the way he makes sense of and reacts to change strategies. Balogun (2006) states that outcomes are linked to middle manager editing senior management plans. As a middle manager Roger is mandated to act within his School with regards to the operational functions and as such he has made the decision not to buy recycled paper for printers and copiers. Roger reveals his power to act or power *not* to act on environmental measures in Extract 2; as Administrator, Roger provides an example of 'power to' (Hardy and Clegg, 2006) in resisting energy reduction measures. Roger holds the necessary resources of skill and knowledge to resist. Roger states that he could work to reduce energy costs, but that the School would not

benefit from his work. He therefore uses his knowledge of this so as not to act. Roger will subtly resist until his work will produce some benefit to the School by way of financial gain. Here Roger reveals 'subversive' resistance (Fleming and Spicer, 2008:302) to implementing environmental management initiatives within his School. Roger states that at work he has 'two hats', so by revealing his professional self and personal self. Whilst he identifies his human and work roles, he resists some of the environmental management initiatives with his 'work hat on'. He promotes the economic benefit to the School at the expense of the morally correct thing to do as he resists measures to reduce energy consumption and therefore costs. Here Roger reveals his cognitive versus emotional responses which equate to ambivalence towards environmental management, following Piderit (2000). The cognitive 'work hat' overriding the emotional 'human side' in this instance. In line with Dopson and Stewart (1990) Roger, as a middle manager, has a clear area of responsibility and control over resources that he needs to be effective, legitimately taking decisions regarding operational functions within his School. However, he lacks influence over other areas such as academics and Central Administrative functions which could also account for his cynicism as proposed by Gabriel (2005). On a personal level Roger states that as a human being 'it would be nice if everything was done' but in fact he resists using public transport and cycling, citing family and time commitments, revealing ambivalence through concurrent notions of knowledge and ignorance (Campbell, 1965, in Weick, 2001:377). In Extracts 5 and 6 Roger reveals that environmental leadership is lacking as 'there is no threat of imposition', thus providing a 'critical appraisal' (Bedeian, 2007:11) of leadership. However, Roger is not frustrated or disillusioned yet states the need for culture change to make a real difference. Through his sensemaking of the situation, Roger alludes to the lack of

environmental leadership and strategy and the reliance on individual voluntary actions.

Following on from his discussion, Roger shows us in his drawing below that he is the middle manager 'stuck in the middle' between the Central Administration departments and academics.

Figure 6.1: Roger, 'Stuck in the middle', Cardiff University



The image provides a powerful metaphor as a vehicle for Roger's emotional expression towards his position (Barner, 2008). Roger relates to himself as being 'stuck' between Central Administration and academics, and as such he constructs meaning through his image. He reveals his interpretation, his understanding, of the situation in that he will not act on environmental initiatives until such time as his School benefits financially (Gioia *et al.*, 1994).

Roger enjoys his middle manager role in that he has the autonomy *not* to implement environmental management measures in his School. Following Dopson and Stewart (1990) he can legitimately take the decision to do this; this is his area of control. Roger reiterates in the drawing that at present the energy costs are borne by the University and not individual Schools, so that any work done by the Schools to reduce energy consumption and therefore costs will not benefit them directly. The financial benefit currently goes to the University yet Roger states that he will help with the energy cost reduction when his School benefits directly. The drawing reveals Roger's 'power to' subtly resist by *not* working to reduce resource use and therefore costs (Fleming and Spicer, 2008; Karreman and Alvesson, 2009); as such, Roger employs his knowledge of administration to resist (Clegg, 1989). Roger identifies his work self as being 'in the middle'. The drawing allows for Roger to 'give voice' to his feelings about being stuck in between Central Administration and academics in line with Barner (2008). Roger alludes to the power relations between academics, Central Administration and School administrators, as those with knowledge create power (Miller and Wilson, 2006). In relation to this situation, Nonaka (1988) proposes that top management create the strategy and vision and that middle managers are the agents for change. In this instance, however, Roger does not have the strategy and vision to implement and he is shaping initiatives in the absence of senior leadership (Balogun, 2006). This replicates characteristics of ambiguous situations (McCaskey, 1982) which trigger sensemaking. In the absence of objective criteria and clear goals from management, Roger relies on his personal values to make sense of the situation. Instead, he has the authority and control within his School for operational functions but not over the Central Administration or

academics whereby he reacts to strategy but lacks influence (Dickson, 1977, cited in Dopson and Stewart, 1990).

6.2.2 Susan, 'The active traveller'

Susan is the Assistant Director for Environmental Safety. Having been instrumental in implementing the environmental management system at the Heath Park site, Susan is heavily involved in developing the environmental management system for the Cardiff University campus along with her many other responsibilities. Susan gained her PhD in Environmental Management and is passionate about putting the environmental management system into practice on a personal level. Susan generally cycles to work or uses the car share scheme when necessary.

Extract 1:

"I specialise on the environmental safety side which is involved with environmental management systems and up until this week I've been developing the university travel plan as well, that has been handed over to a separate directorate – I have an interest in that but no management responsibility for travel areas...Also I don't have anything to do with energy – that's Estates - so it's slightly fragmented here".

Extract 2:

"We have a number of initiatives in place but what we could do better is to communicate things but there is an awful lot of good work that goes on. I'm trying to think of any formal procedures issued – obviously we've communicated things – it's a slow process which can be frustratingly slow sometimes, but it's really trying to change people's attitudes. Yes certainly within my own department I still don't think we're totally there but it's constant nagging about turning computers off if you're not there, at the end of the day turning equipment off, trying to get double sided printing across the board – and that's something we're trying to get the message out and about to all the schools where we're doing the pilot projects...It's a constant drip-drip process of trying to change people's attitudes, and 'would you really do this at home'? Well they probably would!"

Extract 3:

"It's more a case of preaching to everybody else or nagging as they would like to call it! ...Communication is a massive challenge. The university & college of medicine are such big organisations, trying to communicate anything is difficult – so yes you tend to have to rely on people who want to do it anyway, and through that people almost feel obliged to join in".

Extract 4:

"Also trying to get the travel message across trying to push active travel – it's a difficult one with everyone wanting to drive their own cars. I often feel like I'm fighting a losing battle when I say to people why don't you walk - 'because it takes time' – yes but it doesn't take that much extra time and you'll feel better for it! I used to cycle everywhere but I can't at the moment so it's down to car share!"

Extract 5:

"Yes there is commitment – sustainability is actually mentioned in the university strategic plan so it is right up there at the top level. One thing that we've been trying to move forward is that the whole issue of environment & sustainability is slightly fragmented and the different areas they're managed within – so it's trying to pull things together and make sure that we do have a clear focus and way forward. At the moment we've got different initiatives that are being led by different directorates, hopefully all being brought together by the sustainability group but as far as the strategy goes at the moment the key thing is the objectives of the sustainability group".

Extract 6:

"It helps that there's a senior member of staff chairing that now and a board member as well. Easier to get things moved forward".

Extract 7:

"I do think it is progressing. I can't think of any specific problems. I think time and resources is the main issue. But there is the argument that I can totally see as making environment management and all these issues part of everybody's responsibility. The danger with having a sole environment manager is that everybody thinks they'll do everything, so there are different ways of doing things but yes it is moving slowly but we are making progress – we've made significant progress over the last couple of years when you think back to when you feel like you're hitting your head on a brick wall but things are definitely on the agenda now, that's very positive".

Susan begins by revealing the fragmented management of environmental initiatives, pointing to signs of organisational cynicism through her frustration and disillusionment (Andersson and Bateman, 1997). Susan is an Environmental Management specialist and as such holds the skills and knowledge to implement environmental measures, yet she lacks 'power over' (Clegg, 1994) University members to implement; relying instead on people who are interested in individual actions. As a middle manager, Susan has many responsibilities including the implementation of the environmental management system. However, the management of implementing the environmental management system is fragmented across several departments meaning that her authority to get things done is limited but her personal commitment and enthusiasm is evident. Here Susan reveals her lack of transitive power (Clegg, 1989) whereby she cannot force others to do things they otherwise would not do. Susan works on areas where she does not have management responsibility and as such she is facing the complexities of implementing changes as a middle manager, as proposed by Dopson and Stewart (1990). Dickson (1977, cited in Dopson and Stewart, 1990) highlights the role of middle managers as managing initiatives and reacting to organisational strategy, whilst lacking influence on decisions. Here, Susan is tasked with implementing the environmental management strategy which is imposed on her; she is the 'agent for change' (Nonaka, 1988), but without the necessary authority and managerial responsibility to be so effectively in all areas. Kanter (1986) summarises the difficult role for middle management of coping with conflicting expectations from those above and below them in the organisational hierarchy as

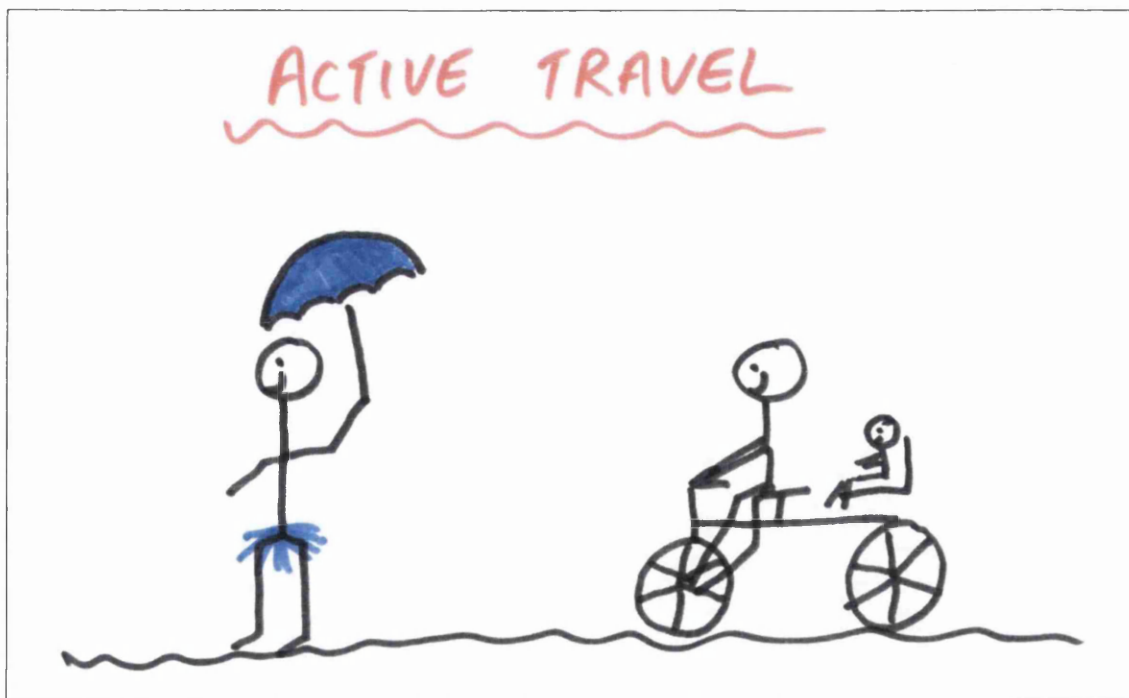
"The squeeze between the demands of strategies they do not influence and ambitions of increasingly independent-minded employees" (cited in Dopson and Stewart, 1990:3).

The outcomes of initiatives imposed by senior management are said to be linked to the sensemaking of middle managers (Balogun, 2006) who play a pivotal role in putting plans into action. Balogun (2006) points to the interpretation of strategy by middle managers to effect intended outcomes, which is evidenced here by Susan being responsible for the environmental management system implementation but that overall management responsibility is 'fragmented'. In Extract 5 Susan highlights the ambiguity of environmental management responsibility as different initiatives are led by different Directorates. Susan lacks influence on decision-making (Dickson, 1977, cited in Dopson and Stewart, 1990). Instead of which Susan personally subscribes to environmental management measures and would like to be able to change the attitudes of her work colleagues, and admits to 'nagging' to push things forward. In this regard, Susan shows her personal frustration at not being able to communicate effectively across the University in order to make better progress. In Extracts 2 and 3 Susan states that the communication of initiatives across the University could be better, as communications have an important role to play in change implementation to increase involvement (in line with Daly *et al.*, 2003; Allen *et al.*, 2007). Here, though, the frustration does not equate to the negative cynicism and resistance put forward by Dean *et al.* (1998) it equates more to the cynicism as an 'evaluative judgement' of her employer (Cole *et al.*, 2006; Bedeian, 2007). She accepts that she would like the environmental management system to be implemented at a faster pace but is pragmatic and happy now that the Sustainability Group is chaired by a Board member which will aid progress. This point alludes to leadership being seen as the key driver of corporate ethics, with leadership styles strengthening or weakening ethical tones (Basu and Palazzo, 2008). The role of environmental leadership is highlighted throughout the data (Higgs, 2009; Dunphy *et al.*, 2007) as Susan

struggles through her lack of ‘power over’ other members. Interestingly, Susan comments that where there is a sole Environment Manager there is a danger that people expect this one person to do everything rather than take on personal responsibility themselves, which is comparable to the situation at Swansea Metropolitan University as discussed in the following chapter.

In her drawing below Susan concentrates her attention on ‘active travel’ such as walking or cycling to work. Susan generally cycles to work and is personally trying to promote the benefits of walking and cycling to her colleagues.

Figure 6.2: Susan, ‘The active traveller’, Cardiff University



As an ‘active traveller’ herself, Susan’s illustration provides a means for her emotional expression; her conscious experiences of implementing environmental initiatives (Barner, 2008). Her drawing is symbolic of her emotional plea to colleagues not to use their cars for work but to take different modes of transport.

Susan reveals that her strong personal and work identities are aligned as her personal values of active travel are carried through into her work life. Despite her enthusiasm, as a middle manager Susan does not have the authority to insist that others follow her lead. Here it is Susan's colleagues who are mobilising their power to resist walking or cycling, which is in line with Fleming and Spicer's concept of 'foot dragging' (2008:302) and subtle subversions of resistance. Susan admits to resorting to 'nagging' her colleagues to act as she lacks transitive power over them to enforce behaviour (Clegg, 1989). Colleagues are able to resist because of the ambivalence of university leaders to implement measures such as active travel. Balogun (2006) highlights the need for leadership of initiatives and for senior management to remain actively involved as the lack of influence held by middle management can act as a barrier for implementation. In this respect the drawing acts as a metaphor for Susan to reveal her personal interest in active travel and that she cannot mandate that others follow her lead on this and other environmental measures. The drawing is part of Susan's emotional expression and conveys her feelings and interests (Barner, 2008:122).

6.2.3 Helen, 'A disillusioned employee'

Helen is a lecturer and is actively engaged in research in industrial relations. Helen has been at the University for around five years and currently lives in Swansea, commuting to work by car but does not belong to the car share scheme. Helen is concerned about environmental issues and actively recycles where she can, for example, by taking responsibility for her printer cartridges as they are not recycled through the University scheme.

Extract 1:

"The notice on our coffee machine was from our administrator. I have a suspicion that the notice on the staff coffee machine is probably prompted by cost rather than environmental considerations, but that's only my view I've got no evidence for that. I don't know how these policies start or who's taking the decisions".

Extract 2:

"I'm aware of the need to recycle in my personal life, in my work life I try not to throw paper away I do put it in the recycling bin. But that's coming from me not what my employer's doing".

Extract 3:

Interviewer ~ Do you personally support the environmental initiatives?

Helen ~ "Generally yes I would support them. I would support the principles. I think these days if there's any sense of awareness of environmental issues we all know what we should be doing in an ideal world, so I hope my employer is doing that".

Extract 4:

"I assume there's a government push or drive so I assume they're trying to comply with targets that are set somewhere for them and I would say after meeting targets it would be cost. I think that is what is driving things because I don't have very much faith in the philanthropy of any employer be it a university or whatever, they run as businesses these days and business only takes account of its own interests really".

Extract 5:

"As a business I'd never trust an employer, I mean that's my cynicism. I would never ever trust the bigger organisation to have the same sort of commitment to these policies. I'm sure if there was a very expensive initiative that had to be introduced whether or not it was the right thing to do would take second place as to how much it cost".

Extract 6:

"There's a lot of potential tension between universities and their staff at the moment in terms of wages, redundancies. There are a lot of areas of conflict and at the same time when you're being asked to generate new initiatives there's a tension there. My suggestions about the way we teach, the way we do things they're not taken seriously. So why would they take me seriously about the environment? There are big issues which aren't directly related to the environment but indirectly impact on it. The fact we have enormous numbers of students from developing countries where we are charging them exorbitant fees, well huge fees, those fees are being funded by countries by people in those countries either who are very wealthy or selling everything they own to educate 1 child. And we're having an environmental impact in developing countries and nobody cares. As long as the money's coming in nobody cares where that money's coming from. If we're talking about having faith in the university to do the right thing, my faith in my university is seriously undermined by how they treat overseas students. It's a side issue to the environment but I don't trust my employer to behave in the right way, because it's the right thing. There's always another motive and it's usually cost".

Helen reveals uncertainty of the environmental measures, triggering her sensemaking of the implementation process. Her uncertainty is caused by a lack of information being communicated to her, causing her ignorance (Weick, 1995). In Extract 2, Helen reveals that her personal self, her values, should be replicated whilst at work; her personal self and work self should overlap. This in turn leads to her voluntary action to recycle where possible. Helen points to the University being run on economic, business grounds and describes her disillusionment with her employer (the University) in that she does not trust them to 'do the right thing'. She says that she has no faith in the University to act in a moral sense and to 'behave in the right way'; because she feels that universities are being run as businesses, they are motivated only by costs (Christmann, 2000). Here Helen brings into the question the ambivalence of University leadership towards environmental management; she identifies leadership as having conflicting cognitive and emotional evaluations, in line with Piderit (2000). In Extract 5 Helen admits that she is cynical regarding this

situation. Her cynicism is derived from her disillusionment about the motives and intentions of the University, following Kanter and Mirvis (1989, cited in Yuxia and Daniels, 2008), who state that when the profits of an organisation are pursued over work ideals then cynicism tends to occur. The external drivers of legislation and targets (Price, 2005; Clarke and Kouri, 2009) override the ethical motives for implementation. Helen shows negative feelings towards her employer (Dean *et al.*, 1998) and provides a 'critical appraisal of the motives, actions and values' of her employer, in line with the definition of cynicism proposed by Bedeian (2007) and an 'evaluative judgement' from her employment experiences (Cole *et al.*, 2006). However, Helen is being cynical towards the University and its motives and values, not towards the environmental management measures *per se* in line with Rubin *et al.* (2009); her organisational cynicism in this instance can be associated with a decrease in organisational citizenship.

6.2.4 Darren, 'Old fogies and ivory towers'

Darren is a second year PhD student researching sustainable mobility. He has previously gained a Masters Degree in Sustainable Architecture and is close to finishing a second Masters Degree in Renewable Energy. He finds himself working increasingly from home and travels to the University by taxi as he does not currently own a car, thus alleviating car parking problems.

Extract 1:

Darren ~ "I know they've been making a bit of greenwash out of sustainability week. You occasionally see a bit of marketing spiel but in terms of something actually filtering down, not really no".

Interviewer ~ Do get the feeling there's much environmental management going on within the university?

Darren ~ "Sound-bites, sustainability as opposed to concrete action, you know. There's a flurry of excitement now and again, you might get some stickers on the lights from the Carbon Trust saying 'turn it off'. The university doesn't strike us as being that proactive, do you know what I mean? There's a recycling bin here and there by the photocopier, but it's the little things - but it's the big things that will really make the change. Others have probably told you they do loads of things!"

Extract 2:

Darren ~ "There are senior managers at the top of our School who have said 'oh sustainability is just a passing fad'; in the main I think there are entrenched views. Looking at it, it is an academic discipline and also as something they've got to implement, I think part of the problem with universities and big institutions is you get old fogies stuck in high places who aren't necessarily responsive to change. So innovation is to be squashed at any cost, do you know what I mean?"

Interviewer ~ So your impression is that top management is interested but not very much?

Darren ~ "I think they're interested in so far as marketing you know something like the green gown awards, slates the university a bit and gives them a bit of a kicking then there will be a flurry of activity, I don't think there's any real commitment or passion. I think these sorts of initiatives are more likely to come from someone at the bottom who's passionately interested and tries to do something, bangs their head against a brick wall for a bit - might get a couple of bins or a couple of stickers up but because there's not that commitment at the top of the university it never really gets embraced".

Extract 3:

"um within this building there's actually quite good commitment and because we're like a little pocket of sustainability - the university as a whole is like a real shower whereas within this building...because there's that commitment to sustainability there's that integrity like sourcing food from sustainable ethical places, sourcing Fairtrade coffee; so within this building there's a lot of communication like switch the photocopier off, switch the coffee machine off before you leave and stuff like that, but the wider university, no. I'm sure it's not impossible to communicate something if it matters".

Extract 4:

"I support everything that's a step in the right direction. I don't support the university in that I think it should be doing a lot more; and I would support a much more ambitious leadership and more progressive initiative take on it but we're not going to get that".

Extract 5:

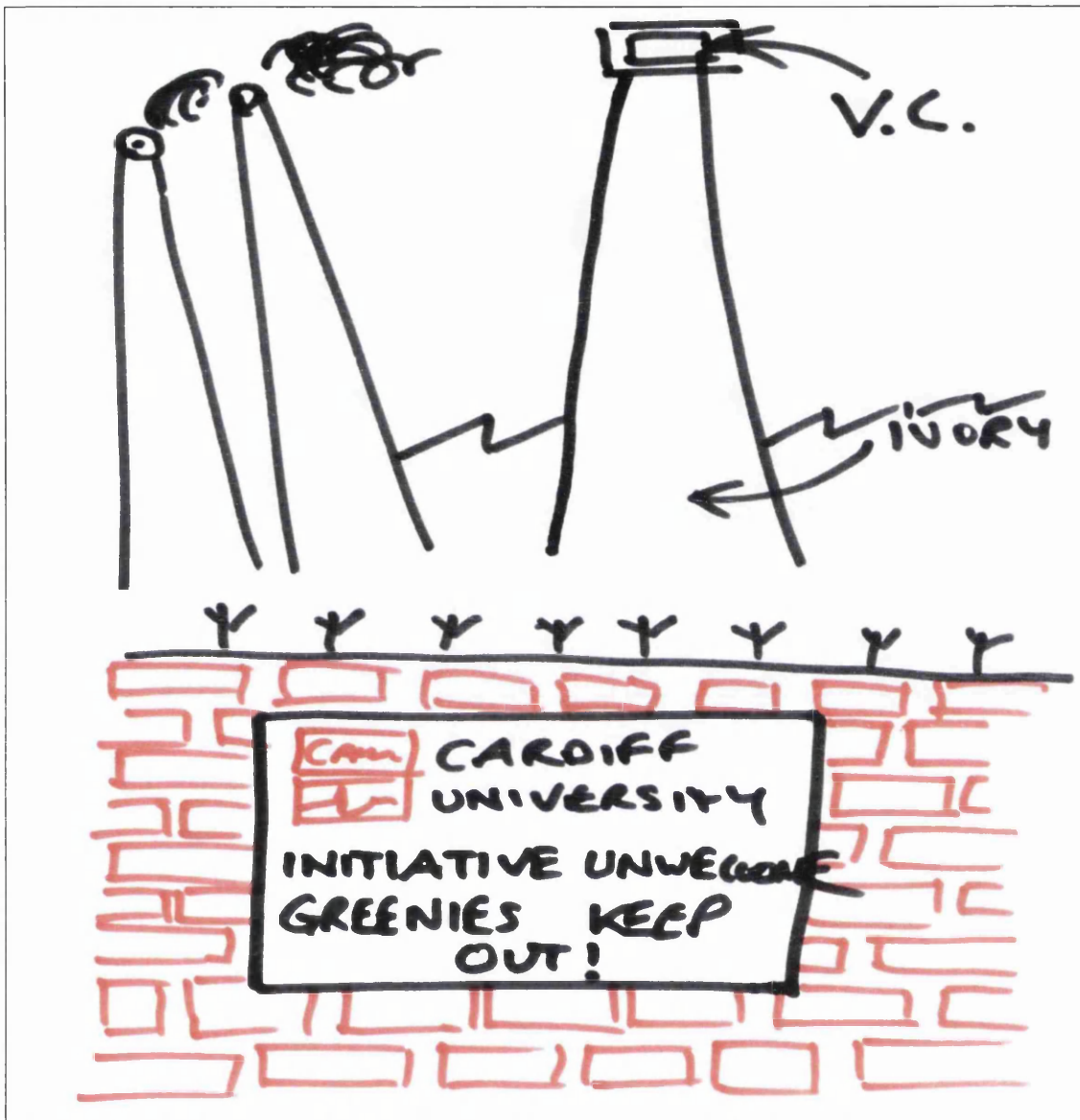
"So what are the problems – well I think with any big organisation the problem with managing all the tentacles so that there's some frustration there. I think if you pick easy targets then there aren't too many problems. The policy that's being pursued is one of least resistance where people aren't really going to object – the facilities management thing is going to happen invisibly without anyone really having to do anything and no one's really been asked to make any sacrifice or do anything much, so as a result if you set un-ambitious goals you're not going to run into any problems, whereas if they have ambitious goals and say right we're going to do this then totally different problems are going to manifest... but I think when you look at the scale of the impact of the university as a whole when you think about all the people that come to the university and all the energy it uses, the trifling efforts – the pissing in the wind – there's nothing that's really taking it by the neck".

As a student and not an employee, Darren feels able to vent his frustration at the lack of environmental commitment and action. His identity as a student impacts on his sensemaking of environmental management within the University (Alvesson and Sveningsson, 2008). Darren's environmental knowledge informs his sensemaking, providing strong views on environmental leadership. His cynicism derives from his frustration and disillusionment which produce negative feelings towards the University, in line with Dean *et al.* (1998). Darren states that he would 'support everything that's a step in the right direction' and as such his comments can be described as cynical as they provide an 'evaluative judgement' (Cole *et al.*, 2006) stemming from his experiences within the University. His comments are not purely pejorative because of his frustration and disillusionment with the lack of progress to environmental management change, promoting the findings of Wanous *et al.* (2000) where management are regarded as being "...unmotivated, incompetent or both" (2000:133). Darren reveals that much more should be done, but that he perceives the

senior management to be 'old fogies stuck in high places' with 'entrenched views' about the environment and as such are resisting implementation of environmental management initiatives. Darren raises the important issue of the leadership of change initiatives as highlighted by Higgs (2009) and Higgs and Rowland (2005), who point to the profound effect of leadership on the outcomes of initiatives and the adverse impacts of negative leadership. Plambeck and Weber (2010) point to the ambivalence of leadership which effects strategy and change outcomes, with leaders of initiatives needing to take account of the emotions, values and mind-sets of change recipients to effect change (Karp and Helgo, 2008). Balogun (2006) also highlights the need for senior management to remain actively involved to effect the implementation of initiatives. In Extract 2 Darren highlights leadership ambivalence towards environmental management existing as simultaneous negative and supportive views, as the University encourages marketing its environmental image yet does not invest in implementing environmental measures (Plambeck and Weber, 2010). The University leadership implements the 'easy targets', the 'low hanging fruit' (Kurzinger, 2004) with un-ambitious targets as the route of least resistance (Extract 5).

Darren is passionate and knowledgeable about environmental issues as evidenced by his studies and research, and this is reflected in his open discussion and drawing below.

Figure 6.3: Darren, 'Old fogies and ivory towers', Cardiff University



The image is in line with Barner (2008) whereby the construction of the drawing as a visual metaphor provides Darren with a means for interpreting and framing his experience of change within Cardiff University. Through his understanding of events, he portrays the Vice-Chancellor as being remote, at the top of an ivory tower; the University itself being unwelcoming to 'green' initiatives. Through his drawing Darren constructs meaning; he portrays his interpretation of organisational change for environmental management within the University. The image provides a

metaphor to give meaning to the situation at Cardiff (Gioia *et al.*, 1994). Darren identifies himself as a 'greenie' because of his environmental knowledge and strong views; his student and 'greenie' identities inform his sensemaking of environmental management within the University. Darren relates to the Vice-Chancellor in an 'ivory tower' remote from the realities of everyday life and the changing needs and attitudes to the environment. He depicts the University as being guarded with a high wall which keeps out those who are interested in promoting and implementing environmental management initiatives. In the background, the air is being polluted by industry. As such, the drawing encapsulates everything that Darren related to in his interview as he ascribes meaning to his emotions (Barner, 2008; Gioia *et al.*, 1994). Darren depicts his negative feelings towards the University revealing his cynicism as defined by Dean *et al.* (1998) and reveals resistance from senior management to encourage and implement environmental management initiatives (Dunphy *et al.*, 2007; Plambeck and Weber, 2010). This aspect also highlights the importance of leadership to effect change initiatives as proposed by Higgs (2009) and Higgs and Rowland (2005).

6.2.5 Cardiff University Summary

Through their retrospective sensemaking these four individuals provided differing meanings for their shared experiences of the environmental management initiatives, in line with the sensemaking proposed by Weick (1995). Basic to the process of sensemaking is metaphorical representation through drawing which is said to enable organisational members to understand new concepts and events (Gioia *et al.*, 1994:365). Through their images, these individuals provide metaphors and symbols to aid their process of sensemaking of environmental management at Cardiff.

However, within this shared experience the individuals play different roles; that of the implementer, the middle manager, a member of staff and a student. The identities of these individuals impacts on their sensemaking of environmental management implementation as they look at the process from different perspectives. As the middle manager responsible for the environmental management system implementation, Susan remains positive about the environmental management system process despite the difficulties she experiences, such as the conflicting expectations of those above her and below her in the University hierarchy (Kanter, 1986, cited in Dopson and Stewart, 1990:3) and her lack of influence over strategic decisions (Dickson, 1977, cited in Dopson and Stewart, 1990). Susan reveals signs of cynicism due to her frustrations at the slow pace of progress, yet this does not transpire into resistance towards the University or the environmental management system. Her cynicism is that as defined by Bedeian (2007) being a 'critical appraisal' (p.11) of her employer; '*critical*' being an 'evaluative judgement' rather than a pejorative term, whilst following Dean *et al.* (1998) who propose that cynicism involves frustration. However, by remaining positive, Susan's cynicism *does not* allude to negative feelings towards the University which goes against the definition given by Dean *et al.* (1998:345). Darren and Helen, however, reveal their cynicism by stating their frustration and disillusionment, following Andersson and Bateman (1997), regarding different aspects but which are aimed at the University in general. Darren wants more initiatives that are 'going to make a real difference' yet he feels that there is not the commitment from the leadership to implement these, whilst Helen shows disillusionment and does not have faith in her employer to act in a moral sense as she states that the University is run as a business. Her lack of faith in the University is likened to Kanter and Mirvis (1989, cited in Yuxia and Daniels, 2008) who state that

cynicism tends to occur when profits are pursued over work ideals of employees. Roger is the other middle manager in this sample and unlike the others, he reveals covert resistance (Fleming and Spicer, 2008) to implementing environmental management measures. He states that his work and economic values override the environmental considerations and he has the power within his School to resist buying recycled paper and to not help with lowering energy consumption. His cynicism is not from frustration or disillusionment but from regarding management as "...being unmotivated, incompetent or both" (Wanous *et al.*, 2000:133). Roger is able to resist such measures because they are not being enforced by senior university management. Roger's cynicism can also be related to Gabriel (2005) in that he resents his lack of power over Central Administration departments and academics. All of the individuals here hint at resistance from senior management within the University following Dunphy *et al.*, 2007, and Fleming and Spicer, 2008. Roger states that 'there is no threat of imposition', whilst Darren points to the lack of commitment and the opinion of some managers that 'it is a passing fad'. Helen states that she "would never, ever, trust the bigger organisation to have the same sort of commitment" to environmental policies, whilst Susan, as positive as she is, highlights that sustainability and the environmental management system are included in the strategic plan and are therefore noted at top level. These observations follow Angus-Leppan *et al.* (2010b) who highlight that strategy emanates from senior management's sensemaking, the outcomes of which effects implementation of environmental management initiatives. Whilst the environmental management system is included in the strategic plan, the implementation is being hindered by the lack of leadership and commitment. Higgs and Rowland (2005), Higgs (2009), Fisher (2003) and Clarke and Kouri (2009) all point to the importance of leadership and its profound effect on

outcomes of change initiatives, whilst Comm and Mathaisel (2005) highlight that it is the responsibility of the leadership to implement initiatives. The support of top management is therefore crucial to the full implementation of the environmental management system.

6.3 Swansea University

The individuals below have been selected from the twenty-nine interviews completed at Swansea University and comprise one Senior Lecturer, Tom; one Lecturer, Lorna; an Administrative Officer, Eric and Stewart who is Head of an Administrative Department.

6.3.1 Tom, 'Environmental management impacts are few'

Tom is a Senior Lecturer in Engineering. His work involves teaching on undergraduate and postgraduate programmes, research supervision and working on his own research projects some of which are Government and industry funded. Tom lives 10 miles from the University and drives to work, parking on campus. He does not belong to the car share scheme.

Extract 1:

"I know there is an Environmental Policy, I've quoted it occasionally but I haven't read it in detail. Across the University I'd say we're doing a bit (with regards to the Policy) but not a huge amount".

Extract 2:

"With students following sustainable development in programmes – I guess we're doing quite a bit with that. So I think as you might imagine, we're good at talking about things & discussing things & we're doing quite a bit of research on environmentally beneficial things but there's probably more we could do on a day to day basis, but they probably take quite a bit of investment".

Extract 3:

Interviewer ~ Do you have a procurement policy in the School?

Tom ~ "We do, yes, we follow the standard university policy – environmental aspects I don't think come into that. It's mainly a case of cost issues, quality & what we're actually getting. I've certainly not come across any procurement where the environmental factor comes into anything".

Extract 4:

"Traffic management – I can't really complain too much as I drive in everyday from about 10 miles away. I know of car sharing schemes but haven't really participated in those much. I did used to cycle in when I lived closer, some people who cycle in like to keep bikes in their offices, but can't now due to Health & Safety – that's one thing I come across numerous times is it seems that H&S legislation is pulling against environmental aspects. Although I don't use them the secure cycle parking is beneficial. H&S legislation conflicts with environmental measures - the University is following H&S legislation".

Extract 5:

Interviewer ~ Do you feel there is a University strategy with regards to the environmental measures?

Tom ~ "Probably not, haven't really come across a great deal of evidence for it. A lot of the environmental initiatives seems to be driven by one or a few people, taking ideas up to management – being told this is a good idea unless it impacts adversely on other things. I don't see evidence in the senior echelons saying this is what we need to do & so on. Not really being led from the top".

Interviewer ~ Do you feel the University has improved its own image or profile through environmental measures?

Tom ~ "In terms of what the university is doing in its own operations, no. I've not come across anything like that. There's quite a bit of university based research which has environmental benefits & that gains good publicity, & that's what we tend to focus on I think. In terms of what the actual university is doing to be more environmentally friendly, I haven't come across anything like that. There's a lot of good environment Research & Development going on in the university which it uses (for publicity)".

Extract 7:

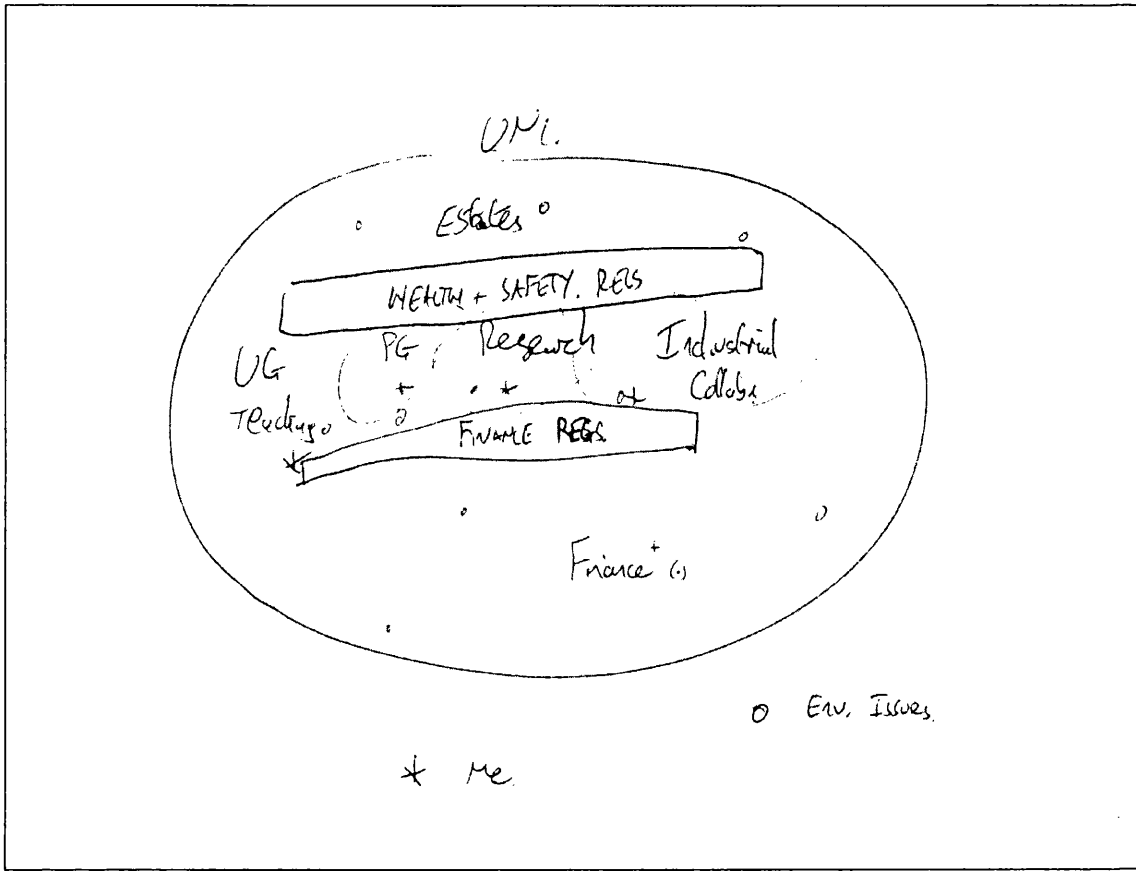
"I think for the university to make big changes to its own environmental impact, in most cases, it would require significant capital investment, & that's going to be a big barrier at the minute. I think what we're doing at the university is what we can do easily. We need to look at what else the university could be doing – what it could be doing is reducing its own energy use, but that will be restricted by the state of the existing buildings; could look at more local energy generation – certainly that's something we could do more of; the transport aspect is something we could do more of – trying to promote more sustainable transport for staff & students. The car park fees are more than they were, but still not prohibitive – not enough to promote car sharing. There could be more done, but that infringes peoples' independent travel which isn't easy".

Within his own research and that of his Department, Tom admits there is much research taking place which could help environmental management operationally but that the research is used more as a publicity tool for the University. Despite the research, environmental management measures are not being implemented across the University; as Tom states 'I'd say we're doing a bit...but not a huge amount'. Here Tom reveals leadership ambivalence towards environmental management as environmental research takes precedence being used for publicity whilst not being implemented in practice, relating to ambivalence as the "optimal compromise" being the "...joint presence of opposing tendencies" (Campbell, 1965, cited in Weick, 2001:377). Tom also implies that there is no leadership or senior management support for environmental management measures as they are 'not really being led from the top'. Plambeck and Weber (2010) propose that top executives play a key role in shaping interpretations and strategic responses whilst Comm and Mathaisel (2003; 2005), Fisher (2003) and Clarke and Kouri (2009) all highlight the importance

of leadership and commitment of senior management to implement environmental management measures at universities. However, leader ambivalence may be minimised by increasing their interest and buy-in for such initiatives (Moon, 2009). Tom's own research interests cover recycling plastics from electronic equipment but he does not come across as a proactive, passionate environmentalist within his University constraints. In this respect Tom shows his individual ambivalence towards environmental management, mirroring that of the University leadership, as he carries out research and supervises other research students on recycling and reducing waste yet does not show frustration or disillusionment at the lack of progress in implementing environmental management measures within the University.

In his drawing below, Tom shows that as a senior lecturer, he has responsibility for undergraduate and postgraduate teaching, research and industrial collaboration.

Figure 6.4: Tom, 'Environmental management impacts are few', Swansea University



The sketch portrays Tom's conscious understanding of his position within the University with regards to environmental management. The environmental impacts are symbolised as singular dots and not a cohesive management system. This symbolism aids Tom's sensemaking of environmental initiatives within the University (Gioia *et al.*, 1994). Tom identifies his work self as being a lecturer and researcher; the drawing illustrates the boundaries and constraints of his work, being the UK Health and Safety regulations and the University's financial regulations. He shows that the environmental management impacts on his work are few because the Health and Safety regulations have a greater impact; the University takes these more seriously due to the threat of legislation. Again he tells us that the environmental management measures are not enforced at the expense of other constraints, revealing

the resistance of leadership. Tom reiterates his interview statements whereby his environmental teaching and research are secondary to University management practices. His work is squeezed between Health and Safety and financial regulations, which is comparable to the situation of the middle manager proposed by Kanter (1986, cited in Dopson and Stewart, 1990) whereby as a manager Tom has to cope with the 'conflicting expectations' of others within the organisation. Although Tom has environmental skills and knowledge as a researcher and lecturer these do not translate into power; he does not hold 'power over' others nor 'power to' enable the implementation of initiatives within the University (Karreman and Alvesson, 2009).

6.3.2 Lorna, 'Window dressing and ticking boxes'

Lorna is a lecturer in the School of Business and has been at the University for four years. She lectures on undergraduate and postgraduate programmes and deals with some student administration. Her research interests include sustainability and 'green' architecture. Lorna lives close to the University and so walks to the campus.

Extract 1:

"Maybe this is a legal requirement now, I don't get the feeling that there's a real commitment. It's more ticking boxes or window dressing. In this building there's no insulation, nothing. Much energy is wasted especially in the winter with heating. So recycling is the bare minimum that could be done".

Extract 2:

"Looking at this Policy it is one of the typical documents, classic example of the language game. Any awareness I have is through a private interest – there's no impact from the policy. I would look for much more involvement, to be told to be more responsible for using heating etc. and to be told how much money people have wasted. If they were serious they would have to invest – put their money where their mouth is. Also with travel – cycling & public transport. If it takes an hour extra to get home people aren't going to do it. The policy shows good ideas but there needs more energy to put these into practice. Looking at the policy statement it's what a politician would say, just ticking boxes – the ultimate language game".

Extract 3:

"I've been affected in a positive way because I don't have anymore work from putting my paper & bottles into the white box as opposed to the black box. But I can see that if someone has more administrative work they might not be so convinced by it. But if we are serious about caring for the environment then it should involve more work!"

Extract 4:

"I'm not sure the university is trying to achieve what's on the policy! Are they just trying to be seen to achieve it? It's window dressing, ticking boxes. How much have we saved, less energy used? Cost savings need to be published and our resource use published – it all needs to be more concrete. Is the university really serious about it? Like the new student halls – there's very little insulation, no self cleaning glass or compound glass which can capture energy. These are probably expensive but unless you are serious it's not going to happen. If everything is a cost factor we're not going to get anywhere with the environment policies. It needs to be accountable & taken seriously. I would be glad to be told the contrary - otherwise it's a language game".

Extract 5:

"I think there would be widespread acceptance of management rolling out environmental measures and taking it seriously. It has to be more coercive!"

Extract 6:

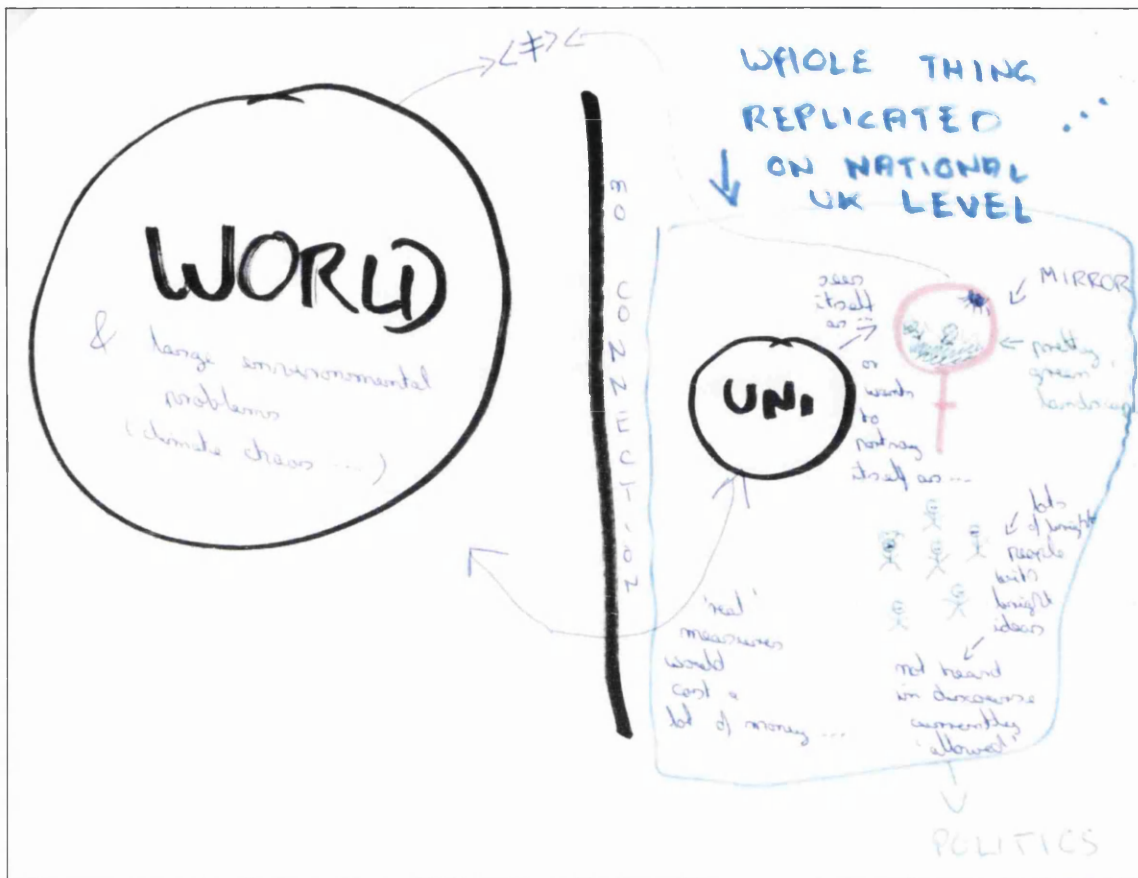
"I don't feel the University is very open to ideas, there have been many lost opportunities. There's no strategy, no environmental leadership. Environmental leadership would be being at the forefront, not ticking boxes. We would gain a higher profile if it (the environmental measures) were cutting edge or used as a benchmark for others. But then I think the University would encounter problems from staff if measures were properly initiated! The MBA programme used to have greening issues, but these are not implemented in the university. Generally researchers are not consulted about issues on campus, for example, the new student buildings".

Within her sensemaking Lorna reveals her personal interest and awareness of environmental management, referring to legislation as an external driver for environmental management (Price, 2005; Clarke and Kouri, 2009). Lorna states that there is no commitment to environmental management and that the University is not serious about implementing the Environment Policy; she states that the Policy is

'ticking boxes' and the management are playing a 'language game' to cover up for their inaction. Her views echo the findings of Comm and Mathaisel (2003), Fisher (2003) and Clarke and Kouri (2009) who highlight the importance of leadership and the support of top management when implementing change initiatives. Lorna states that putting environmental management measures into practice is going to take money, time and effort on the part of senior management, in line with Halme (cited in Welford, 1997) who points to the problem of obtaining support from senior management for such initiatives. Owing to the lack of enforcement, Lorna states that measures are only implemented due to the personal interest of some University members and that ideas so far have come from staff pushing initiatives as there is no environmental leadership, yet this *ad hoc* approach is seen as inadequate by Spellerberg *et al.* (2004). Lorna's cynicism stems from her frustration and disillusionment at the lack of progress on environmental management, leading to negative feelings towards the University (following Dean *et al.*, 1998). Her view of senior management is that of being unmotivated to act towards change (Wanous *et al.*, 2000). Lorna also reveals foot-dragging, a variant of resistance, by senior management through their lack of strategy and failure to implement the Environment Policy (Fleming and Spicer, 2008:302).

Lorna's drawing below shows a disconnect between the University and the outside world with regards to environmental issues.

Figure 6.5: Lorna, 'Window dressing and ticking boxes', Swansea University



Through the use of metaphor, Lorna represents the University as being disconnected with the outside world with regards to environmental issues. The image provides meaning; a means for interpreting and framing experiences (Barner, 2008). The mirror in the drawing provides a metaphor for the unrealistic view which the University portrays of itself; Lorna's experience is that the University is not 'green'. The drawing enables Lorna to reveal her interpretation of her experience. Following Barner (2008) the drawing 'gives voice' (p. 120) to her emotional reaction to the lack of environmental management within the University. The world and the University are shown as separate entities with 'no connection' and no overlap. The University is depicted as having 'lots of bright people with bright ideas' but they are 'not heard in the discourse currently allowed' as the political landscape denies them of having a voice. The University is keen to see the reflection of itself in the mirror as a 'pretty

green landscape', yet this is not the reality according to Lorna. She states that 'real measures would cost a lot of money' which the University is not prepared to invest. Here Lorna reveals the resistance of the leadership to implement environmental management initiatives; the University is disconnected from the wider environmental issues. Lorna's cynicism is exposed in her representation of the University. In line with Dean *et al.* (1998) and Bedeian (2007) her disillusionment is revealed through the negative feelings towards her employer with regards to environmental management implementation.

6.3.3 Eric, 'Where's the strategy?'

Eric works in the Finance Department within the Purchasing Team and is responsible for negotiating contracts, managing the research equipment tendering process and providing guidance on methods of purchasing. He has worked at the University for nine years and takes a personal interest in environmental issues.

Extract 1:

"We can't mandate anything, there was no formal decision (to buy recycled paper). We can do a benchmarking exercise for paper on the national contracts to compare difference in costs, so we encourage and recommend people to buy the recycled even if it costs a little bit more. The wide use of recycled paper is more thanks to the people out there taking our recommendation, as we can't mandate it".

Extract 2:

Interviewer ~ How are the purchasing initiatives implemented?

Eric ~ "We wave the flag, to encourage people to react to environmental products. Also with contract management of suppliers – we're asking for flagging of environmental products".

Interviewer ~ Would you say this is top-down or bottom-up pressure for this to happen?

Eric ~ "As far as I'm concerned, well with top being Senior Management Team & Pro Vice Chancellor, I would say it's not totally top down it's somewhere in the middle & it's down probably more up than down. I think students have been a big driving force, I think there are a lot of staff who have been a driving force otherwise you are living a double life – what you're doing at home you come here & everything is being wasted & not recycled. So I think staff have driven it from the middle".

Extract 3:

Interviewer ~ In that respect, do you feel there's a clear environmental vision from management?

Eric ~ "Well there's an Environment Policy, but I don't think the policy has been changed since 1999 so I would have to say I don't think there's a clear sustainable vision, it's not just environmental – that sits inside sustainability. I don't think there's a clear sustainability vision. There's not much point in having a policy without a strategy. It's all very well saying we have an Environment Policy, but the policy is only a means of getting you from A to B without telling you where B is. Without a strategy there's no direction".

Extract 4:

"Because I was the Department Representative on the EMS group I've become the office Champion & getting people to turn things off, & do after hours checks naming & shaming people. It's not officially part of my role. As a purchasing officer I suppose my role has changed slightly, but probably down to me rather than someone else saying 'we should be looking at this'".

Extract 5:

"Being pleased to see a major organisation like this is recycling is a positive thing, but it would be nice to see that more things are taken on board. I don't think these are a waste of time & think they are necessary. If the planet is going to survive it's going to be down to pockets of people doing things. We are being driven by the Welsh Assembly in terms of sustainability, so that is working from the top down. It's just unfortunate when it comes down certain levels there's a bit missing regards to the top-down in the university".

Extract 6:

"Going back to the point of this is the policy but where's the strategy? Where are they trying to get to? The policy states what they want to do, how to achieve it – but where to get to? By how much do they want to reduce the waste, use of fuels by? They've got some momentum but no direction".

Extract 7:

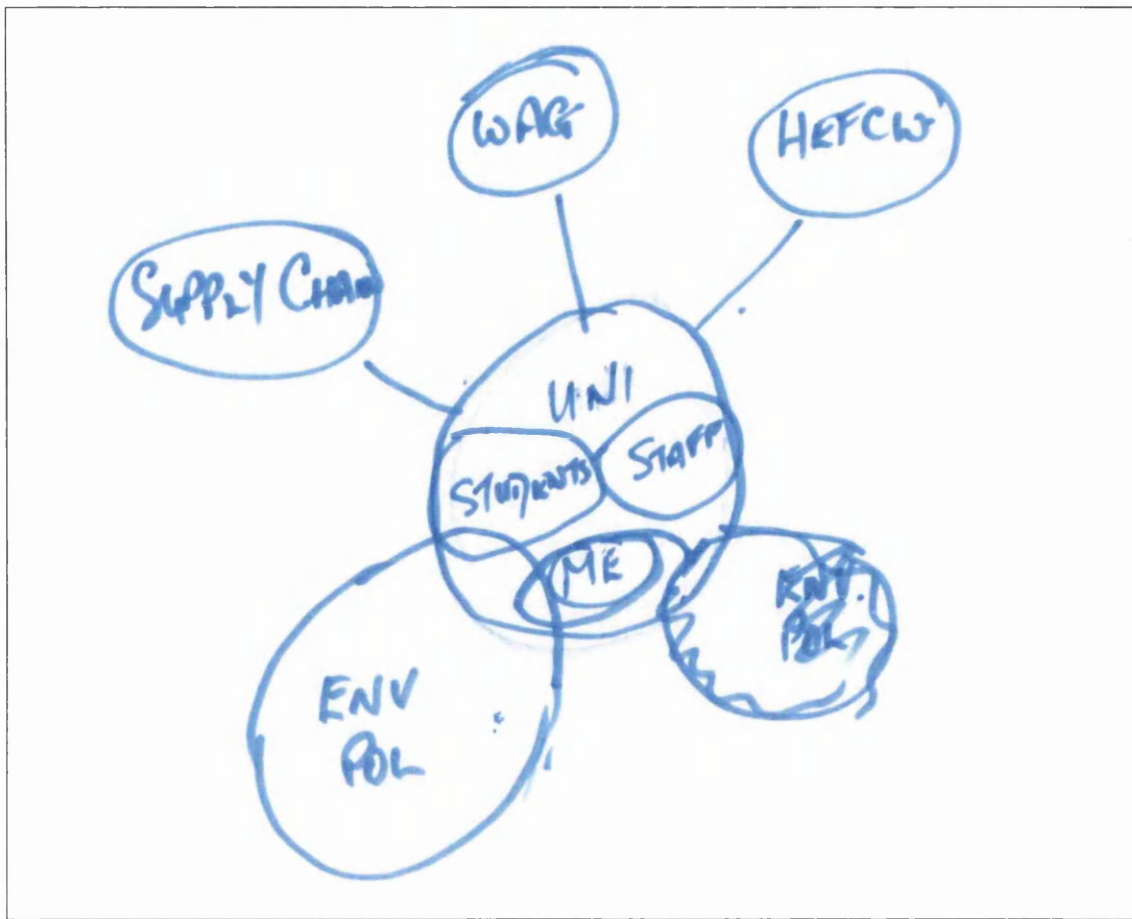
"Problems – yes several issues. Lack of leadership as it doesn't come from the top, it relies on pocket initiatives. Cost is always thrown up as historically being environmental did cost money, I think there are people who take convincing that you can actually have sustainability & save money. Even if it means spending a little more initially & saving in the long run. But there are a lot of issues where you can have quick fixes. There are still people who think of environmental issues as they would 15 years ago".

Through his sensemaking, Eric states several times that there is no clear environmental vision; there is the Environment Policy but without a strategy there is no direction. His question 'where are they trying to get to?' implies the ambiguous characteristics of a situation which McCaskey (1982, cited in Weick, 2001) proposes to trigger sensemaking. Senior management have not issued clear goals or success measures for others to follow. Within his role in the purchasing department environmental considerations are not mandatory and there are no formal purchasing procedures. Eric can only encourage and recommend the use of environmentally focused purchasing procedures by 'waving the environmental flag' as he lacks transitive powers (Clegg, 1989) for enforcement of procedures. Students and staff are the driving forces as people are looking to practice their environmental measures at work as they do at home, otherwise they are 'leading a double life'. Eric has taken on the role of Departmental Environmental Representative, which is not part of his official role but he feels it is important to carry out checks to ensure energy is not wasted and to raise awareness. Like him, there are lots of people thinking the same thing with some mavericks leading the way. Eric feels that environmental

management is not being led from the top (see Comm and Mathaisel, 2003; Clarke and Kouri, 2009) and filtering down as it should, but instead it is reliant on 'pocket initiatives'. Here Eric alludes to emergent strategy and the *ad hoc* approach described by Spellerberg *et al.* (2004) as 'inadequate', whereas all that is necessary is to put the Environment Policy into practice. With students and individuals taking the lead on initiatives this follows the emergent strategy as proposed by Dawson (2003), being initiated bottom-up with a continuous adaptive process. Such *ad hoc* initiatives come with the inadequacies as described by Spellerberg *et al.* (2004) and the predicament of being implemented by those individuals with a less formal power-base. Halme (cited in Welford, 1997:83) highlights the dilemma of obtaining senior management support for implementation and with this in mind, Eric states that there is the need for a Sustainability Champion to provide this direction within the University. The importance of leadership, top management support and commitment for effective implementation is highlighted by Comm and Mathaisel (2003); Fisher (2003); Clarke and Kouri (2009). Eric reveals that the top management need convincing of the need to implement environmental management measures as he feels that their view on this issue is out of date; a statement which implies resistance from top management to act (Dunphy *et al.*, 2007). With regards to Eric he shows negative feelings towards his employer and is frustrated by the lack of progress yet his cynicism, as defined by Dean *et al.* (1998) does not translate into resistance. Eric remains positive and proactive towards implementing environmental management initiatives.

In his drawing Eric depicts the external factors impacting on the University comprising students and staff groups.

Figure 6.6: Eric, 'Where's the strategy?', Swansea University



The image aids Eric's understanding of environmental management within the University through the use of symbols, in line with Gioia *et al.* (1994). Eric provides understanding of the impacts of external drivers for environmental management on the University and of the agents within the University itself. The Environment Policy is shown to overlap with Eric and students, but interestingly not with other staff in general and there is no evidence of top management being shown. The Welsh Assembly Government and the Higher Education Funding Council for Wales, along with the supply chain, are shown to impact on the University as external drivers, yet these drivers do not get carried on through the University due to the lack of senior leadership; as Eric states that 'there's a bit missing regards to the top-down in the University'. As such, Eric perceives that the Environmental Policy is only impacting

on a very small section of the University. The drawing is a metaphor for what Eric perceives is happening; there are external pressures on the University yet the leadership are not involved. The Environment Policy is peripheral and only impacts marginally on Eric and students as they are the only ones interested in environmental management initiatives. Here again Eric exposes the lack of leadership and support from top management, proposed by Comm and Mathaisel (2003), Fisher (2003) and Clarke and Kouri (2009), as being necessary to implement environmental management initiatives within universities.

6.3.4 Stewart, 'Needs someone with initiative'

Stewart is the Head of his Department and is responsible for around 100 staff. Due to his middle management position he has been proactive in implementing measures within his Department, but these have not been taken up across the university.

Extract 1:

"As I said we're a very proactive department any way. We've got lots of hats to wear we're a commercial business at the end of the day & got to be self sufficient which impacts of costs of implementation – I'd love to be the most self sufficient we can become, the more we can recycle the more we can turn around and help with the impact, reduce carbon footprints. I welcome it with open arms, really if we had the same culture across the whole university we would make a bigger impact with it, but I can't speak for outside of the dept".

Extract 2:

Stewart ~ "From a university point of view I think we could become more self sufficient – and it would be more cost effective for the university as well, the environmental impacts & carbon footprints etc & natural composting with food waste, it would be terrific –I've mentioned it in other meetings & they look at me & think, 'crickey he's off again' – but you've got to have somebody who has a bit of initiative, as I said the impact on the environment is for the children & children's children, you know...I've got my views, I'm sure slowly but surely it's improving, but there's lots more initiatives that need to be taken & it goes back to that 4 letter word for some people – work - & that needs to be managed & unfortunately that's sometimes slower than ... as a proactive department & I travel at a rate of knots in this department - I want things done like yesterday – but it doesn't happen quick enough for me – if you want something it takes 3 months to get it and that doesn't wash with me".

Interviewer ~ So you think more could be done?

Stewart ~ "Yes absolutely, there should be initiatives & business plans built in, there should be someone driving it completely lock stock & barrel. Yearly business plans – I've got mine ready for this year now. And yes there should be strategies & projections & time frameworks to work to get things done & if it isn't done then why not?! There's lots to be done & I'm just sticking a few ideas on to this interview because I think there's lots to be done – it's not being critical of anybody it just needs to be driven and it's not being driven as hard as it could be but there you are".

Extract 3:

"I think it's creating awareness, there needs to be an awareness campaign. Rather than documents that were put in in 1990 or whatever like this one (the Environment Policy) there needs to be ... well from my perspective, because I'm actually involved with certain managerial environmental meetings, I cascade that down in communications through my management meetings & then that goes through supervisory campus catering meetings. It needs communicating and again somebody actually driving that so there's awareness aspect of cultural change should be cascading down through communication. I mean it's one thing sticking a policy on the internet but who the hell reads it? That's my thoughts on it actually and that's what we certainly try to do".

Extract 4:

"Yeah it's difficult how it filters down to me really from the Senior Management Team here. I think what there needs to be are some clearly defined objectives and there needs to be a clarity of communication to the Heads of Department like myself maybe through the Environment Engineer. There should be some clear defined strategies so that everybody is clear about where we're going."

Extract 5:

"Yes I think the University could do more, definitely. With all the wonderful academic brains we've got here I think there needs to be a strategy as I've said & it needs to be clear to everybody what the strategy is. At the moment there isn't a clear strategy & an awareness campaign of what the university has set its objectives for. There should be a 5 year plan on what their thoughts & strategy is going to be...why not get the university to research what people think about their strategy & how we feel where we're going? Why not get the people who matter, myself I'd certainly turn round & give them an input as you're probably aware! I've certainly got some issues that I think they should take on board (laughs). It could be a really good impact on their strategy – I certainly would ... I get looks to say 'where's this guy coming from' but it's not an insurmountable issue to implement. Yes you have to be proactive with these things & forward plan".

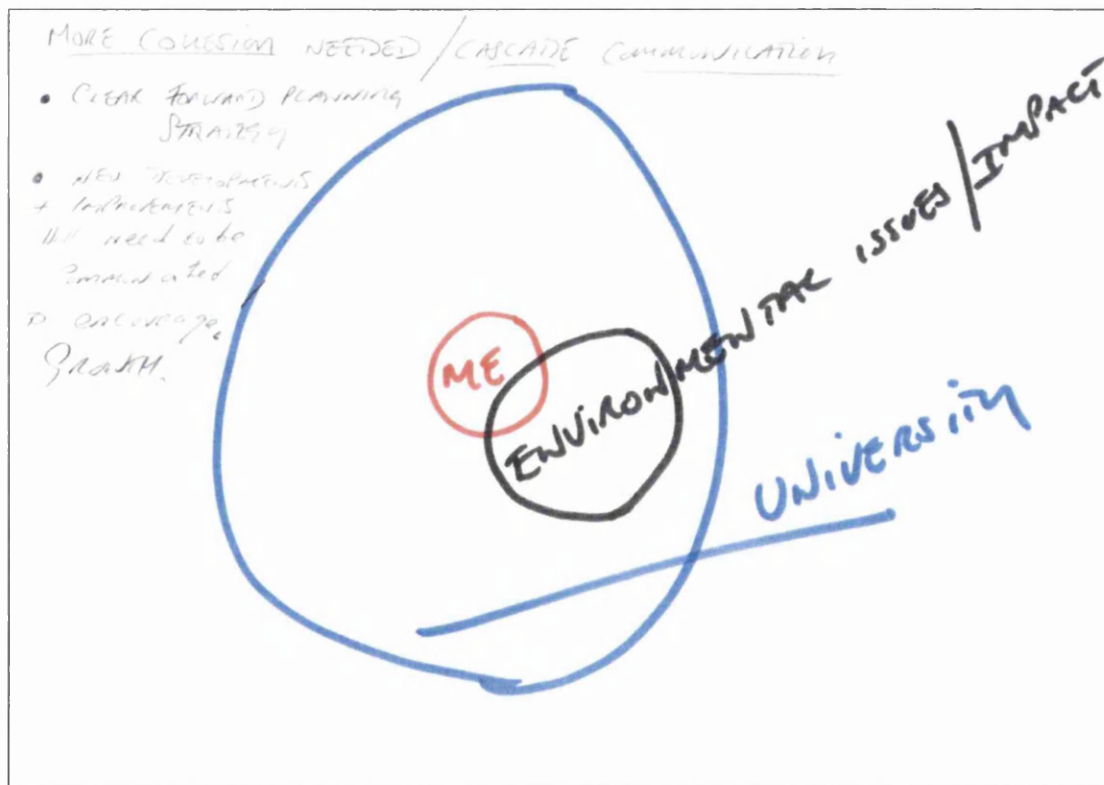
Stewart faces an ambiguous situation which triggers his sensemaking, following the characteristics of ambiguity proposed by McCaskey (1982, cited in Weick, 2001:44).

As a middle manager Stewart does not have guidance from clearly defined goals or success measures, as he states 'what there needs to be are some clearly defined objectives'. In line with Dickson (1977, cited in Dopson and Stewart, 1990) Stewart reacts to University strategy and lacks influence on decisions. Stewart is aware of the resistance from top management to act (Dunphy *et al.*, 2007) and is also self aware of his enthusiasm but with limited powers to act. Stewart lacks 'power over' those outside his Department, but he does hold 'power to' enable his Department to implement certain measures (Karreman and Alvesson, 2009). He has many ideas and a vision for what could be done, but is aware that peers and those more senior to him see his ideas as 'crackpot'. It is possible that his peers feel threatened and that his initiatives would cause them additional work. In this respect they are resisting environmental implementation; they are mobilising their power to resist in the form of subversive 'foot dragging' resistance (Fleming and Spicer, 2008:302) as there is no enforcement for them to act. Stewart is clearly frustrated with the lack of strategy and planning from senior management and as such has a negative view towards his

employer, resulting in the organisational cynicism highlighted by Bedeian (2007) and Dean *et al.* (1998). However, although his cynicism relates to negative feelings towards his employer he remains positive and proactive, in line with a 'careful evaluation' of the University stemming from his experiences (Cole *et al.*, 2006).

In his drawing Stewart shows himself within the University along with environmental issues and their impact only partly overlapping his situation. The drawing enables Stewart to voice his strong emotions regarding environmental management in the University (Barner, 2008).

Figure 6.7: Stewart, 'Needs someone with initiative', Swansea University



For clarification, the writing states:

“More cohesion needed / cascade communication

- Clear forward planning strategy
- New developments and improvements will need to be communicated to encourage growth”.

The image is symbolic of environmental management within the University, with the words providing a vehicle for Stewart’s emotions. The drawing aids understanding for Stewart as he makes sense of the situation (Gioia *et al.*, 1994), ‘giving voice’ (Barner, 2008) to Stewart’s sensemaking of environmental management. Stewart identifies himself in the University with no relation to University leadership. Stewart reiterates his frustrations of the need for a strategy and ‘clear forward planning’, along with the need to communicate new initiatives (Thomas *et al.*, 2009; Lewis, 2007). Stewart reveals that ‘more cohesion is needed’ to integrate environmental management throughout the University. Such a strategy would have to come from the leadership within the University and would need to be supported by senior management. This situation reflects Higgs (2009), Comm and Mathaisel (2003) and Clarke and Kouri (2009) who all highlight the importance of leadership and the commitment to implement change initiatives, whilst Halme (cited in Welford, 1997) points to the problem of obtaining senior management support. Whilst Stewart has the power and ability to be proactive within his own Department he realises that his influence is limited, being unable to make changes throughout the rest of the University. As a middle manager, he lacks influence on decisions (Dickson, 1977, cited in Dopson and Stewart, 1990). His frustration shows through as he is desperate for the top management to take an interest in environmental (and sustainability) issues, to devise a strategy and plan for the future of environmental management throughout the University. Stewart’s cynicism as frustration and negative feelings

towards the University follow that proposed by Dean *et al.* (1998) and Bedeian (2007), yet he remains positive and proactive towards implementing environmental management initiatives.

6.3.5 Swansea University Summary

This section has provided a discussion of individual sensemaking of environmental management at Swansea University through interview extracts and images. Following Gioia *et al.* (1994), when trying to understand a new concept such as environmental management, these individuals have tried to ascribe meaning to it retrospectively. The images have enabled further understanding of new experiences to create meaning through the use of symbolism and metaphor. Sensemaking is further informed by the identity of the individual, in line with Alvesson and Sveningsson (2008). The individual sensemaking in these interviews reveals sources of ambiguity in line with McCaskey (1982, cited in Weick, 2001:44), as Lorna, Eric and Stewart place importance on their personal values and emotions regarding environmental management initiatives which then clash with those of the University hierarchy. The lack of commitment by top management overall reveals shortages of time, money and attention to the issue, whilst Stewart, as a middle manager, does not enjoy the privilege of being guided by clearly defined, coherent goals. Following Weick (1995) these four individuals have a shared experience of the environmental management within the University. In some instances they have produced different meanings for themselves, but not in all; the issue of resistance from senior management as proposed by Dunphy *et al.* (2007) and Fleming and Spicer (2008) is prevalent within these cases. All four individuals state that the environmental management measures lack the senior leadership deemed necessary for implementing

change initiatives by Higgs (2009), Clarke and Kouri (2009) and Comm and Mathaisel (2003). As a proactive middle manager, Stewart is the most vociferous on the matter of leadership and commitment. He has 'power to' act in his own department (Karreman and Alvesson, 2009) but as his drawing emphasises he is clearly frustrated at the lack of senior management strategy and planning, revealing his organisational cynicism as defined by Bedeian (2007) and Dean *et al.* (1998). Contrary to Gabriel (2005) Stewart does *not* resent not having 'power over' other Departments and senior management, unlike Roger at Cardiff University. Instead of resisting, Stewart remains proactive and plans for the future. Eric does not have 'power to' mandate environmental considerations within the purchasing function and he can only 'wave the flag' to promote environmental considerations. In this regard he is as proactive as he can be, but he is reliant on there being a Sustainability Champion to provide vision and leadership. In his drawing, Eric reveals the non-existent leadership. In the absence of formal systems, both Stewart and Eric are implementing their individual, *ad hoc*, initiatives which Spellerberg *et al.* (2004) deem as inadequate for an environmental management system. Neither Lorna nor Tom have input into the environmental management initiatives yet both recognise that the initiatives are 'not being led from the top'. Tom's drawing shows the constraints placed on his work with very little impact from environmental issues whilst Lorna reveals her emotions and frustration with what is happening at the University. In spite of their independent sensemaking of the situation, these four individuals relate to this same cause for concern. However, despite the strong indication of frustration at the lack of commitment to environmental management by senior management and signs of disillusionment to a certain extent, I do not sense any form of overt resistance from these individuals. As such, the organisational

cynicism revealed here follows the interpretation of Bedeian (2007) who points to cynicism as a 'critical appraisal' (p.11) of an organisation in terms of evaluation and judgement, in line with Cole *et al.* (2006).

6.4 Chapter Summary

The data from the eight individuals discussed in this Chapter provided a cross-section of narratives ranging from middle managers to students. In line with Weick (1995) and Weick *et al.* (2005) these individuals have made sense of the processes to implement environmental management initiatives from their retrospective look at shared experiences. These individuals have modified and embellished a shared storyline (Brown *et al.*, 2008) to make sense for themselves, retrospectively, of equivocal actions and outcomes. As proposed by Angus-Leppan *et al.* (2010a), sensemaking is relevant here as it is a way for these individuals to reduce the confusion of the process to implement environmental management initiatives. Sensemaking is informed by the identity of the individual (Alvesson and Sveningsson, 2008); either by the status of the individual or by their personal values. The images have enabled the use of metaphorical representation to aid sensemaking, in line with Gioia *et al.* (1994). Examples here include Roger and Darren (Cardiff University) and Lorna (Swansea University) who have used metaphor as a means for interpreting and framing their experiences of environmental management within their respective universities (Barner, 2008).

The concept of ambiguity is found in all aspects of organisations and the narratives here reveal characteristics of ambiguous situations which have triggered sensemaking, in line with those proposed by McCaskey (1982, cited in Weick,

2001). Stewart (Head of Department, Swansea) suffers from the absence of clearly defined, coherent goals from University leadership to progress environmental management within in his Department, whilst Eric (Finance Department, Swansea) states that there is no environmental vision or strategy laid down to follow. Both Susan (Assistant Director, Cardiff) and Lorna (Lecturer, Swansea) suggest that a shortage of time and money investment for environmental management initiatives is part of the problem. In the absence of objective criteria, the interviewees are reliant on their personal values to make sense of the situation within their respective universities. In line with Gioia *et al.* (1994) and Barner (2008) the drawings as visual metaphors have enabled the interviewees to make sense of environmental management and give meaning to what is happening. The interviewees have been able to express their emotions and experiences through their drawings (Barner, 2008).

The data revealed the importance of environmental leadership and many of the interviewees here relate to the lack of leadership and commitment towards environmental management initiatives. Higgs (2009), Clarke and Kouri (2009) and Comm and Mathaisel (2003) amongst others point to the importance of leadership for the implementation of change initiatives such as environmental management measures. In his interview, Darren (PhD student, Cardiff) reveals that senior management have 'entrenched views' and are therefore reluctant to initiate change, whilst all of the interviewees at Swansea University suggest that it is a lack of environmental leadership and commitment which hinders implementation of environmental management initiatives. This lack of leadership and senior management support in turn leads to organisational cynicism as frustration,

disillusionment and negative feelings towards the universities by interviewees (following Andersson and Bateman, 1997; Dean *et al.*, 1998). Whilst organisational cynicism has been referred to as a 'negative attitude' (Dean *et al.*, 1998:345) towards an employer, it is important not to imply this cynicism as purely pejorative, but that it should also be interpreted as "...an evaluative judgement" (Bedeian, 2007:11) based on employment experiences (Cole *et al.*, 2006). As middle managers, both Susan (Assistant Director, Cardiff) and Stewart (Head of Department, Swansea) reveal their frustration in not being able to progress implementation at a faster pace; they do not hold adequate power to do so, yet they both remain positive because of their personal beliefs. In this respect their organisational cynicism remains an evaluative judgement of the situation. Helen (Lecturer, Cardiff) shows her disillusionment with the motives for decisions taken by the University, whilst Darren (PhD student, Cardiff) and Lorna (Lecturer, Swansea) reveal their negative feelings towards university leadership and their perceptions of resistance to act on the part of leadership. These instances of organisational cynicism are significant in that they are associated with the decreased organisational citizenship, job satisfaction and organisational commitment suggested by Rubin *et al.* (2009).

Whilst there are instances of ambivalence by individuals, interviewees strongly suggest ambivalence on the part of university leadership. Plambeck and Weber (2010) state that ambivalence arises when an issue, such as environmental management, is seen simultaneously as positive and negative, whilst Campbell (1965, cited in Weick, 2001:377) proposes that ambivalence is the 'optimal compromise' in evaluating a situation where there is a balance of knowledge and ignorance. Kaplan (1972, cited in Plambeck and Weber, 2010) refers to ambivalence

as holding competing evaluations. Tom (Senior Lecturer, Swansea) states that the University is interested in environmental research but that this is beneficial for publicity purposes and not put into practice within the University. Darren (PhD student, Cardiff) suggests a similar situation whereby the University is interested in marketing environmental aspects whilst not being committed to putting these into practice. As such, ambivalence can give rise to resistance towards initiatives (Brown and Cregan, 2008). Plambeck and Weber (2010) note that where senior management are ambivalent towards initiatives, this affects the strategic implementation and outcomes for the organisation as sensemaking precedes decision-making (Angus-Leppan *et al.*, 2010b). Fleming and Spicer (2008) and Dunphy *et al.* (2007) note that senior executives and those in positions of power also resist; this is not purely the domain of employees lower in the organisation.

Both the ambivalent responses and organisational cynicism can be construed as subtle resistance to environmental management. In addition, there are some instances in the data where individuals illustrate their use of power to apply covert resistance to environmental management, mobilising their power to do so (Fleming and Spicer, 2008). Senior management use their hierarchal position (Dunphy *et al.*, 2007) to resist implementation through not providing strategic planning and investment, whilst on an individual level, Roger (School Administrator, Cardiff) uses subversive tactics to resist enforcement of initiatives (such as *by not* reducing energy consumption and related costs) as noted by Thompson and Ackroyd (1995, cited in Fleming and Spicer, 2008). By not providing an environmental vision and strategy the ambivalence of the university leadership can be construed as a subtle, latent, resistance to implementation.

The following Chapter provides a discussion of individual sensemaking of the implementation processes for environmental management at the Post-1992 universities of Glamorgan and Swansea Metropolitan.

Chapter 7: Making Sense of Environmental Management within Post-1992 Universities

7.1 Introduction

This Chapter discusses individual sensemaking of the processes to implement environmental management initiatives within the two post-1992 universities of Glamorgan and Swansea Metropolitan. These 'new' or 'modern' universities were created by the UK Government from existing polytechnics and colleges being granted university status under the Further and Higher Education Act (1992). Research has since been undertaken to discover the differences, if any, between the management styles of pre-1992 and 'new' universities. Knight (2002) points to the differences in the governance structures of pre-1992 and post-1992 universities, highlighting the managerialist culture in many post-1992 institutions, whilst Deem (2007) finds no indication of 'new managerialism' within pre-1992 and post-1992 universities, only that all institutions in their study were guilty of slow decision-making.

The data analysis in this Chapter highlights themes from the first-level organisational analysis of drivers, leadership, competition and image, whilst providing a discussion of power, identity, organisational cynicism, ambivalence and resistance as a result of individual sensemaking in relation to environmental management within Glamorgan and Swansea Metropolitan universities. Following the format of the previous Chapter, four individuals are chosen from each of these two universities in line with the cross-case pattern searching of Eisenhardt (1989), providing a balanced sample of middle managers, academics, staff and students. Selected extracts from each of the interviews and images provide examples of individual sensemaking with regards to

environmental management initiatives. The use of images in this research provides an aid to interpreting and framing experiences, thus enabling the process of sensemaking of environmental management initiatives (Barner, 2008; Gioia *et al.*, 1994). The data highlight the prevalence of ambiguity and uncertainty of environmental management caused in part by the lack of communication of initiatives from leadership to university members (Frahm and Brown, 2007), resulting in members not becoming engaged in the process of implementation (Thomas *et al.*, 2009; Lewis, 2007; Daly *et al.*, 2003). Through their sensemaking, individuals reveal an emergent strategy (Terry, Glamorgan) reliant on interested individuals taking low-level action to implement environmental initiatives. Vicky (Glamorgan) states 'there are isolated individuals who are very keen', whilst Ben (Swansea Metropolitan) talks of 'encouragement' to act on a basic level. This situation highlights the ambivalence of leadership through their simultaneous negative and supportive view of environmental management (Plambeck and Weber, 2010), resulting in their subtle resistance (Fleming and Spicer, 2003) to fully implement initiatives.

The discussion begins with Glamorgan University.

7.2 Glamorgan University

Glamorgan University has had an ISO 14001 accredited environmental management system in place since 2006 and is the only university in the study to have an environmental management system in place. The following four individual cases have been selected from the nine interviews completed at Glamorgan and comprise Terry, Head of Doctoral Programmes; Vicky, a Senior Lecturer; Margaret, an

undergraduate student and Student Union Officer and Kevin, a Student Administrative Manager.

7.2.1 Terry, 'The enthusiastic amateur'

Terry is Head of Doctoral Programmes within his School and is the Education for Sustainable Development / Sustainability Champion for the University. He has been at Glamorgan for nine years and his research interests include Corporate Social Responsibility and sustainability.

Extract 1:

Interviewer ~ Do you feel there's top-down leadership with all of this or more of a groundswell of middle-bottom-up pushing of environment issues?

Terry ~ "I think both is the short answer. I think in the language of strategy there's an element of planning but there's also a strong element of emergence in terms of the changes taking place, in other words as you say bottom-up, ad hoc, not necessarily instrumental or strategic if you like in the sense of people doing it because they think they'll get something out of it".

Extract 2:

Interviewer ~ How are the initiatives communicated to you?

Terry ~ "I don't think they are yet if I'm honest - I think those of us who are interested or as it were in the know are enthusiastic & know all about it but I don't sense, for example, that your average middle manager in central functions or your average senior lecturer in the faculty will be receiving a structured targeted communication saying these are our environment policies. I know there are - and again this is echoed when I talk to colleagues across other universities - you tend to get the enthusiastic amateur who is pushing it".

Extract 3:

"Me as a strategist I'm saying we can use these kind of things for competitive advantage. My personal consideration is that it needs to be a moral consideration as well but when I'm selling it to Directorate it's the language of competitive advantage. So I sense if this time next year if we had this conversation that there would be more structured examples of communication, possibly, throughout the university. But not particularly at the moment".

Extract 4:

Interviewer ~ Has your job or routine changed?

Terry ~ "Well yes mine has personally because I'm involved in all these initiatives, again you might be getting a different answer someone who's teaching supply chain management or something. I'm not saying they wouldn't be interested in all this stuff, I'm not saying people are ignorant of it - it's just I don't think in all honesty that much has changed in routines & procedures & formal structures".

Interviewer ~ So do you feel a lot of this is still voluntary?

Terry ~ "Yes, it's voluntary, peripheral - I'm not saying it's not important, please don't think that but it's very much down to the individual which is surprising in a university like Glamorgan, but I sense a sea change potentially about to take place. You know the whole idea is gaining a critical mass, I sense a tipping point - largely because there's no senior management buy-in, I think because emergent strategy can only go so far you need that catalyst".

Extract 5:

Interviewer ~ So you feel that this comes from someone in Estates rather than someone higher up?

Terry ~ "Yes I think so but I don't know. Possibly up until very recently but now there is a sense in which at a very senior level in the university, not necessarily Vice Chancellor but lower down, there's an acknowledgment that we have not only an opportunity in terms of competitive advantage and differentiating ourselves from the opposition but also actually, yeah, moral & ethical obligation to do the right thing in terms of the environment & broader social responsibility as well. But I think that's probably a fairly recent thing".

Extract 6:

Interviewer ~ Do you feel the university encourages new initiatives?

Terry ~ "I do at the moment yes but I think it's been a while coming and sometimes people do things in spite of the organisational constraints rather than facilitated by the organisation - but I think that's changing. But as I said this whole area it's full of enthusiastic amateurs & the university is a good fertile place for enthusiastic amateurs. In all seriousness I do sense there is a culture of encouraging this & a culture of acceptance of these kinds of initiatives".

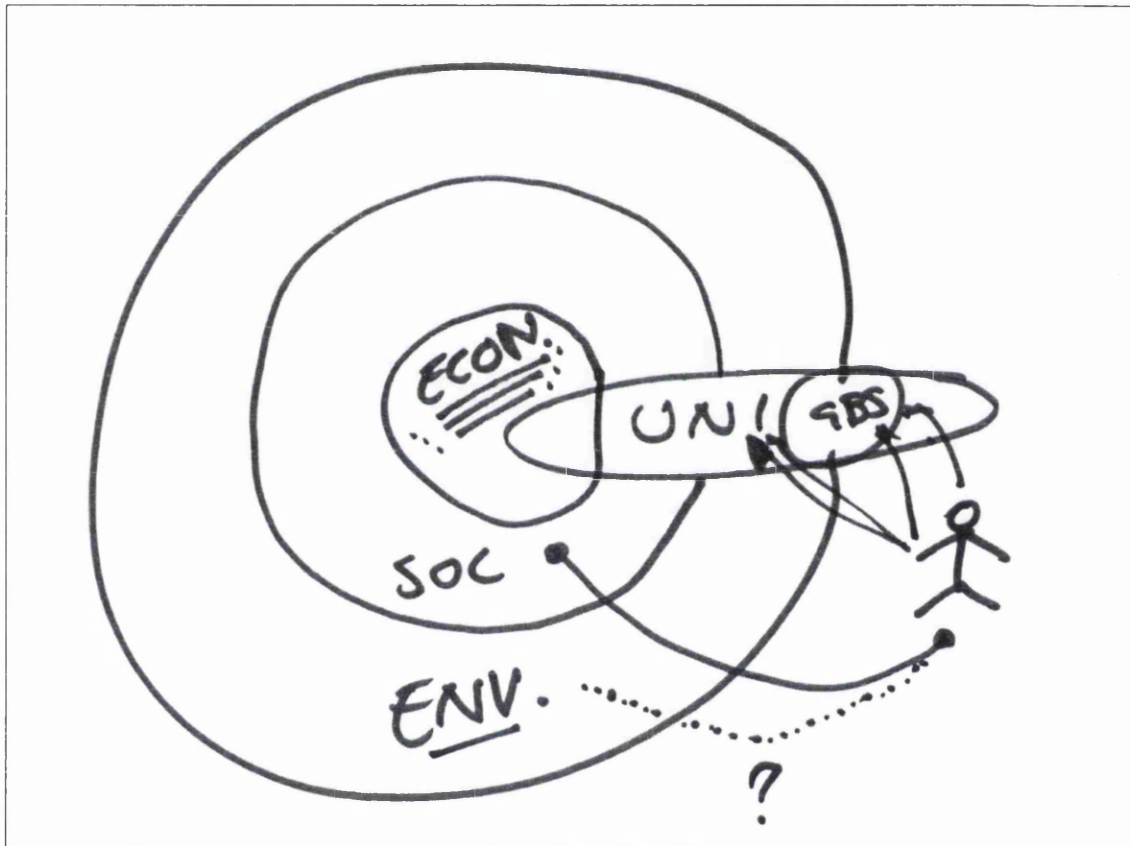
As an 'enthusiastic amateur' Terry identifies him self as one who takes individual action on environmental management; he has the environmental skills and knowledge to do so. The retrospective process of the interview provides an

opportunity for sensemaking of the change process to implement the environment management system; despite Glamorgan having an environmental management system in place, this is not being fully implemented. This situation creates ambiguity, a lack of clarity, for university members as there is no leadership or enforcement of the initiative; implementation relies on voluntary interest from those such as Terry. Ambiguity is compounded because of the lack of communication to disseminate environmental initiatives to members and to gain their interest in the change process (Thomas *et al.*, 2009; Daly *et al.*, 2003; Klarner *et al.*, 2008). Terry reveals that middle managers do not receive 'structured targeted communication' regarding environmental policies, which indicates that he is facing an ambiguous situation from a lack of information which triggers his sensemaking of environmental management (Weick, 1995:91). Terry is pragmatic about the role of the environmental management system within the University by being honest about what is happening and what is not. As the Education for Sustainable Development representative and with his research interests in sustainability issues, Terry would appreciate senior management leading the full implementation of the environmental management system. Terry states that the strategy employed for implementing environmental management measures is both top-down and bottom-up, in line with Clarke and Kouri (2009), yet the impetus is coming from individuals and not from the University which in turn relates to the *ad hoc* initiatives of Spellerberg *et al.* (2004). Terry states that there is a 'strong element of emergence' in line with the emergent strategy identified by Dawson (2003) and he relates to the work of 'enthusiastic amateurs' due to the lack of strategic planning and 'no senior management buy-in' (Angus-Leppan *et al.*, 2010b). The importance of leadership and commitment to the implementation of change initiatives have been highlighted by Higgs (2009) and

Clarke and Kouri (2009), whilst Christensen *et al.* (2009) propose the need to adopt formal procedures as the good intentions of individuals are not enough. Terry highlights that initiatives are not enforced and that they are voluntary; “it’s very much down to the individual, which is surprising in a university like Glamorgan”. Here, Terry highlights the resistance of senior management (Dunphy *et al.*, 2007) to fully implement the environmental management system and their ambivalence towards the situation. Senior management are mobilising their power to resist implementation following Fleming and Spicer (2008) whilst their ambivalence is borne out by their positive and negative views (Plambeck and Weber, 2010). However, the Directorate reveals their ambivalence (Piderit, 2000) towards environmental management through their positive and negative responses. The University is said to be becoming more interested in usefulness of environmental management as a competitive advantage over other universities and as a tool to improve its image, yet they are unwilling to act on the ethical response. The Directorate took the initial decision to implement the environmental management system as a positive move for the University yet they now regard the necessary investment to fully implement it as a negative distraction. This situation indicates leader ambivalence (following Piderit, 2000) whereby their positive cognitive response to the initial environmental management system is in conflict with their negative cognitive response to the financial cost. The ambivalent evaluation of the environmental management system by the leadership is affecting their strategic processes and outcomes for the University (Plambeck and Weber, 2010). The data reveal the importance of understanding the causes of ambiguity and the sensemaking of leadership as their decisions on issues such as environmental management emerge from their sensemaking (Basu and Palazzo, 2008). Rubin *et al.* (2009) propose that

the central role of leaders is to facilitate organisational change and that organisational cynicism can have negative effects. Terry indicates that senior management are unmotivated to create change (Wanous *et al.*, 2000).

Figure 7.1: Terry, 'The enthusiastic amateur', Glamorgan University



Through using his knowledge of environmental aspects, Terry provided a sketch which aids his sensemaking of environmental management at Glamorgan. The image acts as a means for his interpretation of the situation based on his experiences (Barner, 2008). Terry's sensemaking of environmental management reveals his work self as being within the University, with the University cutting across the wider, outside society. As such, he identifies environmental issues surrounding the

University, revealing the importance of the University's environmental impacts on the wider society. Through his environmental skills and knowledge he reveals an awareness of the impact of the University on society through environmental management. Terry identifies himself as being part of the School and the University in an official capacity, but also as an individual being part of society and as part of the wider environment as an 'enthusiastic amateur'. A question mark is drawn to query his role and impact on the environment. Terry's drawing provides a visual way to give meaning and interpretation of his experience of environmental management within the University (Barner, 2008). The drawing aids his sensemaking process through ascribing meaning to the new concept of the environmental management system (Gioia *et al.*, 1994). To achieve the cross-cutting role across all of these wider aspects of the economy, society and the environment, the environmental management system needs to be fully implemented within the University. Christensen *et al.* (2009) and Spellerberg *et al.* (2004) highlight the need to adopt the formal procedures of an environmental management system to gain the full benefit to all of implementation, as mere good intentions are not enough to provide this benefit. Full implementation and practice of the environmental management system will be achieved through environmental leadership and gaining the support of senior management, as proposed by Higgs (2009) and Sharp (2002), whilst Moon (2009) points to increasing buy-in for change initiatives through minimising ambivalence towards change. Terry's environmental knowledge does not translate into 'power over' other members to enforce the environmental management system nor does he hold 'power to' enable environmental measures (Karreman and Alvesson, 2009). Instead he is reliant on using his environmental skills and knowledge as being an 'enthusiastic amateur' to enhance the environmental management system.

7.2.2 Vicky, 'We still have quite a long way to go'

Vicky is a Senior Lecturer who runs programmes for outdoor learning and pursuits. She has worked at the University for around five years and has purposefully developed the degree programme curriculum into the area of Education for Sustainable Development.

Extract 1:

"We used to have a 'turn the lights off' kind of process but that went by-the-by because people, if they're not reminded all the time they just forget to do it, so quite often there's lights left on but even though I know that Estates have tried in the past to remind staff, they've sent out emails saying can you turn lights off in the rooms, staff have done it for about 6 months & then if they don't get reminded over again it doesn't become part of their psyche. It doesn't go across the board - it would be a more Department specific thing really".

Extract 2:

"I had an involvement with Keep Wales Tidy to have a look at the site to develop it into a teaching area. We used to have a Taff river clean up day that I coordinated but that was started by me with getting together all the community groups & saying once a year we'll go out & clean up the river. We did it for about 3 years running but the 4th year it didn't run because it always seemed to be the worst weather, but it went by the by & nobody wanted to take it on board after that".

Extract 3:

Interviewer ~ Do you feel that these initiatives are being pushed from the top-down or middle?

Vicky ~ "No I would say well middle probably. Clearly the office staff don't have a huge say in making up new processes. If they're given incentives by estates or by managers in their departments then they would do it but – for instance if the head of department uses recycled paper in the photocopier then they will, but if there isn't then the admin staff probably wouldn't go ahead and do it."

Extract 4:

Vicky ~ "Well I think there are the initiatives and strategies of the Welsh Assembly. So if there's a requirement for HEIs to have them then we have them. We did have, and I'm probably going to go back on myself now, we did have a directive from Directorate, a strategy from Directorate, to implement the ISO14001 & I think we were the first university in Wales to get that. In reality when I said before that it was coming from middle management, it probably isn't - I think that the overarching Directorate are happy have to have that initiative in place, it's just how much of that actually ends up being implemented and so we still have quite a long way to go".

Interviewer ~ So it was a strategic move by the directorate to get the ISO 14001 but on a day to day basis it's not fully implemented?

Vicky ~ "Yeah, no it's not really implemented".

Extract 5:

Interviewer ~ Do you feel the University has an environmental strategy?

Vicky ~ "No, I couldn't put my hand on my heart & say that's the case. There are isolated individuals who are very keen on it, and they tend to push things through but I couldn't say there's strong environmental leadership as foundation throughout the university".

Extract 6:

Vicky ~ "I'm trying to get about 500 stickers saying 'please turn off the lights' in each of the rooms & I know that Estates if I get the stickers then they'll go round & put all the stickers in the rooms. Now having said that, that's me going & getting the stickers from my contacts & I know that Estates are going to do that on a Saturday morning outside of their normal work time - so it's not a University type thing it's a..."

Interviewer ~ ...Very much an individual, voluntary thing?

Vicky ~ "Yes pretty much, yes. But then the ISO is a really big project and it would have taken a couple of years to get the documentation together and get the processes in place for them to say 'yes we have enough in place' & we're an ISO14001 - what I'm saying is there must be a lot of other initiatives that I don't know about and if that's the case then they're not being communicated because for us to have ISO14001 I was actually quite surprised that we had it! There must be a lot that I don't know about because for us to have that then my understanding of it from having worked with it in the past it's quite extensive but I don't see the implementation of that so there must be something we're doing that I don't see & it's not being communicated".

Through her retrospective sensemaking, Vicky reveals the overlap of her work and personal identities; she has a personal interest in the environmental aspects of her work. Vicky identifies the need for cultural changes in order to instil environmental management initiatives long term as currently, members implement initiatives on a short term basis only. Environmental initiatives need to be re-affirmed by communication; constant reminders to effect new behaviour and to gain people's interest (Thomas *et al.*, 2009; Lewis, 2007). This lack of communication creates a situation of uncertainty as members are ignorant of the environmental management system, thus creating an occasion for individual sensemaking of the implementation. Vicky states that the environmental management initiatives are not being communicated and that 'there must be a lot that I don't know about'. This statement implies a lack of clarity and ambiguity surrounding the environmental management system which triggers Vicky's sensemaking of the situation (Weick, 1995). Vicky has been proactive by developing her degree programme to include environmental aspects into the curriculum. She appreciates the work done by the Estates Department and has worked with them on initiatives, but admits that she has to instigate certain initiatives herself otherwise nothing would happen; whilst some measures are implemented in her Department these are not replicated across the University. Vicky points to small initiatives, such as turning off lights, which are instigated but fade away as people do not adopt these into their routines. Here Vicky reveals that the environmental management measures are not enforced and are 'not really implemented'. These individual actions imply a lack of leadership and commitment towards the environmental management system. Post and Altman (1994) classify inadequate leadership as an internal barrier to the implementation of change initiatives, whilst Higgs (2009) recognises the importance of leadership and

the adverse impacts which negative leadership have on implementation. With regards to the environmental management system Vicky states that this was a Directorate initiative, but feels that it is not being fully implemented and having previously worked with an ISO 14001 environmental management system, she was surprised to find that Glamorgan had this in place. Her views imply ambivalence by the Directorate towards the environmental management system as they see this simultaneously as a positive and negative benefit for the University (Plambeck and Weber, 2010; Piderit, 2000). Their instigation of the environmental management system was a positive move, but subsequently they have failed to invest time and money to fully implement it. This relates to the organisational change cynicism of Wanous *et al.* (2000) whereby the Directorate are unmotivated to enact the environmental management system. Leadership is argued to be a key driver of organisational ethics (Basu and Palazzo, 2008) and plays a key role in shaping strategic responses. As such, the sensemaking of leadership needs to be understood with relation to how they make critical decisions (Basu and Palazzo, 2008:123). Plambeck and Weber (2010) go on to propose that such ambivalent evaluations by the leadership affect strategy and outcomes for the organisation. Vicky states that initiatives are voluntary and only implemented by interested individuals, agreeing with statements made by Terry. The lack of environmental leadership and strategy dictates that implementation is reliant on individual action, in turn revealing leadership ambivalence to the environmental management system. The directorate took the initial decision to set up the system, yet has failed to fully implement.

7.2.3 Margaret, 'The reluctant convert to online voting'

Margaret is a final year undergraduate student and also works for the Student Union as a Student Officer. She has been at the University for a total of six years. Margaret gives us a view as to how students are impacted by environmental management measures.

Extract 1:

"I do think as well though that a lot of the bins that are on campus I don't think they're used well. I don't know whether that's because students just don't know enough about it because I think a lot of the time if they're darting in between lectures they don't want to worry about 'oh I'm putting this plastic in this bin or this glass in this bin', do you know what I mean? I just think a lot of the time it's put more on them and it shouldn't be. I think a lot of the time it's just put on students - they're expected to do this, do that and we're just as busy as you lot are".

Extract 2:

"So if you really want us to recycle the glass provide a glass bottle bank that will be collected and not for us to do. I think a lot if it is put on us, they don't want to do that if they're 18 and just come from home, they don't want to recycle. I think they are trying to do more but I know from my point of view I was never told anything, 'figure it out by yourself', that sort of thing".

Extract 3:

"From a work point of view I recycle all the paper, like when I go to meetings we have stacks and stacks of paper and it's such a waste so we make sure we recycle all that because we go to these meetings more or less every other day and we have quite thick minutes so we make sure that all goes into the recycling. And with our voting system as well for election for the Sabbatical Officers that used to be a paper ballot but it's all electronic now and we've got our technical guy upstairs he's set all the website up and done all the voting online stuff and we even tried like before we had a limited amount of paper to make posters and things we tried to limit that by opening Facebook groups up for all the actions. So instead of having reams of posters put up you have a Facebook site as a candidate so we have done a lot more electronic stuff for the elections".

Extract 4:

"And like I said the bottles are harder to recycle than anything else because you have to find a bottle bank. But I think people would be more than happy to do it - if it was made easier for them then they'd do it, well I know I would look at it from the point of 'well I've got lectures to go to I haven't got time to be sifting through bins'!"

Extract 5:

Interviewer ~ Do you think the university gets a better image or profile from its environmental initiatives?

Margaret ~ "I think so yes. If they weren't going to get anything out of it I don't think they'd bother. If they've got a lot of bigger things going on like the finance issues and tuition fees and that kind of stuff so recycling a glass bottle isn't really top of the list, but they'll do it because I think it gives face and it shows well we don't want to be the only university not doing it, that no one will want to go to Glamorgan because... I think a lot of it is 'face' and you can't get away from that. As much as they want to deny it, it is there".

Extract 6:

Interviewer ~ Do you feel there are students coming to the Union saying they want to do more?

Margaret ~ "As far as I'm aware, no. But as I say I don't tend to deal with a lot of Societies. As far as I know then no, but a lot of my mates they're miserable like me they want to be left in peace to smoke outside and be left alone! I fall in the category of 'I've done my bit', kind of. But a lot of people are being more proactive - they may well be coming in and saying things but just not to me".

Extract 7:

Interviewer ~ Do you feel things have moved forward over time?

Margaret ~ "Yes I do, like the online voting - I really didn't want that to happen I would rather keep the paper ballots, that wasn't an environmental thing I thought the fun of election week would be taken away because you haven't got voting we were used to. But then I realised I was probably the only one who's been here this long but the newer ones were quite willing to go along with the new ideas. I agree that online voting is better for the environment but I thought they'd lose all the fun. I think change is inevitable but sometimes you want to go on as you were. Like I said, most things are gradual but that wasn't a gradual thing it was just dropped on us and there was quite a lot of panic but it has worked. It did make more sense to do it online - we needed fewer staff and fewer posters".

Margaret identifies her self as having two roles within the University; those of being a student and a Student Union Officer. The ambiguity surrounding the environmental management system acts as a trigger for her sensemaking, as the initiatives are unclear to her because of the lack of information communicated to students. Margaret feels that the onus is on students to take individual, voluntary action to implement environmental management initiatives without indication from University leadership. She is happy and keen to recycle when she can and when it is easy for her to do so, such as the paper in the office, yet she feels that the onus is put on students to recycle other materials. She states that recycling on campus is onerous and time-consuming and that the University needs to provide better information and facilities for students. This lack of guidance and information leads to uncertainty for Margaret, her ignorance triggering sensemaking of the situation (Weick, 1995:95). Her resistance is revealed as cynicism through her frustration and negative feelings towards the University (Dean *et al.*, 1998) as she states that 'we're just as busy as you lot are' and that 'I haven't got time to be sifting through bins!'. The Student Union is also being proactive in implementing new ideas as Margaret admits to not wanting the electronic voting system in the Student Union but agrees that it works well. Here her subversive resistance is exposed through 'foot dragging' (Fleming and Spicer, 2008:302) as she wanted to keep the paper ballot system and keep things as they were. However, some ambivalence is revealed as Margaret will act on some initiatives, but also wants 'to be left alone', providing a simultaneous positive and negative response to action. Margaret also reveals leadership ambivalence to the environmental management system when she states that recycling is not a priority for the University but that it 'gives face' and that the University does not 'want to be the only university not doing it'. The leadership ambivalence is in line with that

proposed by Piderit (2000:788) whereby the initial response is to implement the environmental management system positive yet becomes more negative as time moves on. The ambivalence also highlights the aspects of leadership and commitment as noted by Higgs (2009), Comm and Mathaisel (2003) and Fisher (2003). Glamorgan is said to want to receive a good environmental image but this is not backed-up by a University strategy to fully implement the environmental management system. This aspect reveals cognitive versus emotional ambivalence by leadership as the system has been put in place but not implemented. Margaret highlights the difficulties of enforcing change processes; members are afraid of change and want the situation to remain the same 'status quo'.

7.2.4 Kevin, 'Flexitime frustrations'

Kevin is a Student Administration Manager and has been at Glamorgan for eight years. He drives to work and uses the car parks on campus but does not belong to the car share scheme. Within his work, Kevin is involved in 'high end' operations but not with strategy formulation and as such he a middle manager. He admits to not being the best environmentally friendly example as he does not have a recycling box in his office.

Extract 1:

Interviewer ~ So as far as you're concerned there wasn't a big announcement but the EMS just filtered through, just started happening?

Kevin ~ "Well maybe I just wasn't in the meeting but it's not really something - I can't think of it having factored in many meetings over the years as an item on the agenda or something to be considered. It's interesting because I've just become involved in the Quality Group for the university and it's 'how do you install a culture of data quality?' - do you police it or who do you task to manage that? And our approach has been to task the people who manage the business process so it's really to have it as a standard agenda item and to sort of make it part of the culture. But I'm just thinking how do you implement something, make something part of the culture, that's why that popped into my head. I keep hearing 'sustainable' that's a word I hear all the time now and it's part of the Faculty's Strategic aims as well".

Interviewer ~ Do you feel this is coming from top-down management, or more of a middle, lower down process?

Kevin ~ "My guess would be that it's been managed by Estates but I would assume that's coming from Directorate, that's my assumption I've no idea".

Extract 2:

"Apart from what's on the website I'm not aware of anything. The only thing I was thinking about when I thought about this topic yesterday was that we have got a big drive for online services so I assume that indirectly that would impact, we're trying to get away from all the paper - I don't know whether that's more environmentally friendly or not I assume it is".

Extract 3:

"I think to protect ourselves obviously we need to be compliant. I assume ethically it would be the right thing to do. And also with individuals there's general support for it, like most of the people who work here I assume".

Extract 4:

"We're in difficult times for everyone at the moment so I don't think initiatives are as important as streamlining. I think it certainly is that type of culture, I think we have too many good ideas sometimes but it's certainly encouraged".

Extract 5:

"I would suspect it's a bit of both but I suspect the main driver is the Directorate. But also I think it's an easy sell, they're speaking to the converted".

Extract 6:

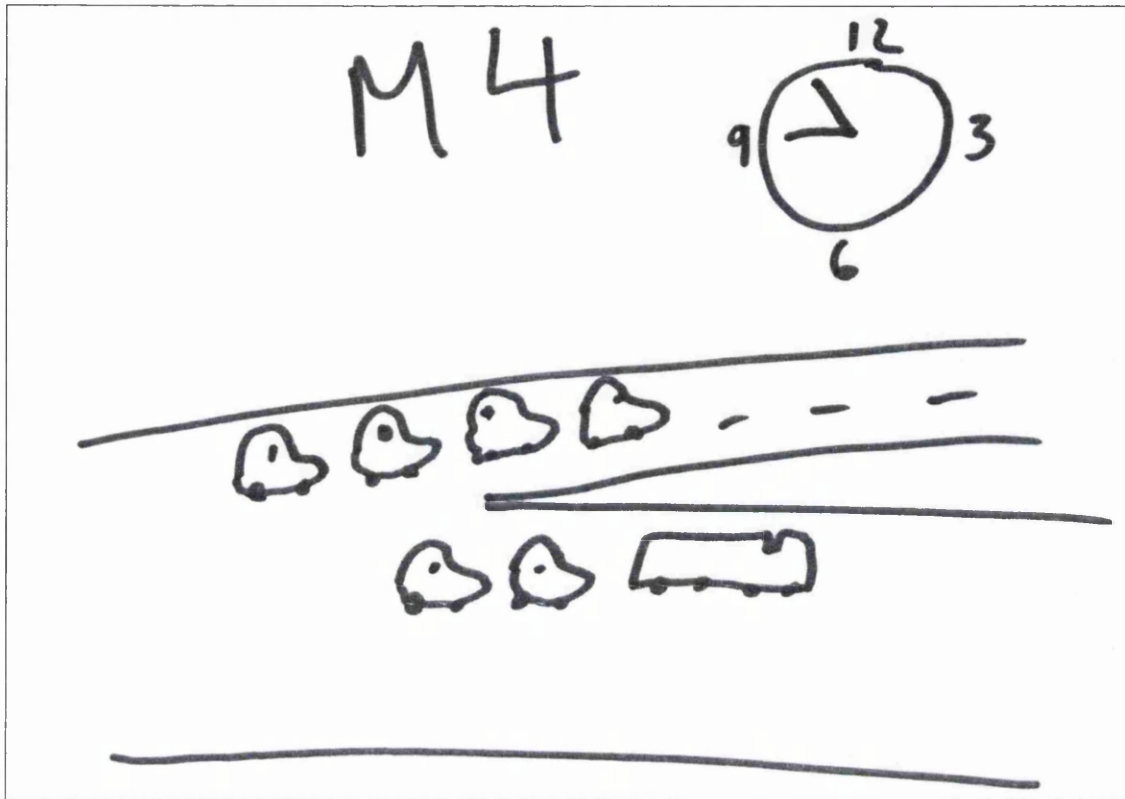
"I certainly never heard anyone saying that the university has gone too far with what it's doing. There seems to be a general acceptance that we should be doing this. Maybe the university should think about doing more, if anything I think that would be the general opinion. There would certainly be support for the university to do more, not that we're not doing enough".

Kevin reveals uncertainty through his ignorance of the environmental management system as he states that "I can't think of it having factored in many meetings over the years as an item on the agenda or something to be considered". This uncertainty creates a condition for sensemaking (Weick, 1995:95). Kevin assumes there are external drivers forcing the University to implement measures, yet also states that it would be the 'ethical' thing to do. However, Kevin is unaware of who is leading environmental management because of the lack of clear communications from Directorate to get people involved. Overall, Kevin is not a proactive individual with respect to environmental management initiatives. He talks about there being general interest and that measures would be supported in the University, but does not partake in these himself and is generally unenthusiastic about environmental measures. Here Kevin reveals his ambivalence towards the environmental management measures as he states that "...I assume ethically it would be the right thing to do" but that he does not take a personal interest in practice. For Kevin this is the 'optimal compromise' (Campbell, 1965, cited in Weick, 2001) as he can see the benefits for the University, yet he does partake in these measures himself. As a middle manager he has no contact with the environmental management system within his operational role and talks as if this would be within the remit of other managers. His statement "Apart from what's on the website I'm not aware of anything" strongly suggests that the environmental management system is not being enforced throughout the University. His ignorance is also due to the lack of communication received (Daly *et al.*, 2003;

Lewis, 2007). Within his role Kevin reacts to University strategy (Dickson, 1977, cited in Dopson and Stewart, 1990) as when introducing himself he describes his role as 'a slave to several masters'. There is no link to Kevin (as a middle manager) from the Directorate with regards to the environmental management system, which highlights the lack of commitment and that leadership of the environmental management system is not in place, following Higgs (2009), Comm and Mathaisel (2003) and Clarke and Kouri (2009). As such, Kevin perceives that environmental management initiatives are for other people to get involved with both on a work and personal level. The University is not enforcing environmental management initiatives on to staff so that only those who are interested will put them into practice. Kevin mobilises his power to resist recycling in his office and to join the car share scheme (Fleming and Spicer, 2008). Kevin admits to not being aware of environmental management initiatives which highlight uncertainty as to what is happening within the University (Weick, 1995). However, as the initiatives are not being communicated to Kevin this reveals subtle resistance by University leaders to fully implement the environmental management system. Kevin reveals that he is not personally motivated by environmental issues; his sensemaking is informed by his identity as someone who has no environmental knowledge.

In his drawing below Kevin relates to the problems he faces with driving to work.

Figure 7.2: Kevin, 'Flexitime frustrations', Glamorgan University



The drawing is symbolic of Kevin's frustrations with his commute to work; he identifies himself as a commuter with the traffic congestion impacting on his personal time, expressing his emotions (Barner, 2008). The image acts as a metaphor for Kevin's frustrations with his employer as he is forced to arrive at work for 9 o'clock, yet he is entitled to arrive later which would allow him to avoid traffic congestion. Through his drawing Kevin reveals organisational cynicism as frustration; his meetings at 9 o'clock impact on his personal time as he is forced to leave home earlier to get to work on time. Although Kevin drives to work every day he does not belong to the popular car share scheme, yet he bemoans the lack of car parking spaces for those like himself who are not in the scheme. By not being in the car share scheme, this impacts negatively on his ability to find a car parking space. His drawing depicts the heavy traffic on the motorway which he comes across when

he needs to start work at 9 o'clock. The University allows flexible working but many of his meetings are scheduled for 9 o'clock which means he drives during the rush hour. He states that if his meetings started a little later it would not take him so long to drive to work and he would not get stuck in traffic. This is not an environmental management issue *per se*, but could be construed as part of a Transport Policy to reduce traffic congestion and therefore carbon emissions. However, Kevin related to this issue as his personal time being taken to drive to work rather than the environmental impacts. In this respect this is the only cynicism revealed by Kevin; his frustration and negative feeling (Dean *et al.*, 1998) for his employer is outlined by the meetings he has to attend at 9 o'clock when in fact he is entitled to start at a later time which would improve his commute to work. The drawing 'gives voice' (Barner, 2008) to Kevin's frustrations and provides a means to interpret his experiences. The drawing conveys a complex situation, that of motorway traffic during the rush hour, meeting times and flexible work hours, car parking problems on campus and the time taken to commute to work.

7.2.5 Glamorgan University Summary

The individual cases provide a diverse cross-section of sensemaking regarding the environmental management system at Glamorgan. In accordance with Weick (1995) and Brown *et al.* (2008) the individuals have edited and filtered their shared experiences retrospectively to produce different meanings for themselves. These individuals reveal their work identities as being academics, a middle-manager and a student with varying degrees of environmental knowledge which impacts on their sensemaking. The two images provided here enabled the individuals to interpret their experiences and to make sense of the environmental management system (Gioia *et*

al., 1994). Terry highlights the 'bigger picture' of the University within the wider community, whilst Kevin's image provides understanding of his emotions towards his commute to work. However, all four individuals indicate situations of ambiguity and uncertainty due to the environmental management system not being prevalent and not being factored into meetings (Weick, 1995:91). The staff members do not have guidance of clearly defined goals from senior management in respect to the environmental management system, in line with McCaskey's (1982, cited in Weick, 2001) characteristics of ambiguous situations which trigger sensemaking. The uncertainty arises from the lack of communication to staff and students (Frahm and Brown, 2007; Daly *et al.*, 2003) to provide information and to enhance interest in the environmental management system. Margaret is the most vocal of the individuals with regards to her frustrations aimed at the University. She states that the 'onus is on students' to find recycling facilities on campus and that she has not 'got time to be sifting through bins'. In this respect her cynicism arises from her frustration and negative feelings towards the University, as proposed by Dean *et al.* (1998) and Bedeian (2007). Aspects of organisational cynicism towards the environment management system are provided by Terry and Vicky, as Terry states that 'there's no senior management buy-in', in that those responsible are 'unmotivated' to act (Wanous *et al.*, 2000:133). Kevin shows individual ambivalence to the environmental management system in that Kevin does not reveal any personal enthusiasm for environmental measures yet he realises that they are a positive aspect for the University, highlighting a positive cognitive and negative emotional response to the environmental management system following Piderit (2000). Other 'subtle subversions' (Fleming and Spicer, 2008:302) also arise in the data. Vicky, who is the most proactive as she organises some low-level initiatives, has stopped organising

the river clean-up yet this task could be completed as part of her Degree programmes, but she chooses not to organise this at present. Margaret was reluctant to accept the online voting system at the Student Union which could be termed as 'foot dragging' (Fleming and Spicer, 2008:302) but she now accepts this is a viable system. The data also reveals ambivalence towards the environmental management system by the Directorate as they use its positive image for competitive advantage yet they have negative views against the costs of full implementation. Such ambivalent evaluations by leadership could affect its strategy processes and outcomes for the environmental management system (Plambeck and Weber, 2010). However, following Moon (2009), increasing interest and buy-in from management and individuals could minimise ambivalence towards the environmental management system. Terry tells us that the environmental management system strategy is both emergent and planned, whilst Vicky states that there is 'no environmental leadership'. These factors point to senior management resistance to fully implement the environmental management system (Dunphy *et al.*, 2007). This resistance of senior management to fully implement the environmental management system is said to arise from their own sensemaking and impacts on their decision making and strategic choices (Basu and Palazzo, 2008). Terry and Vicky state that the implementation of the environmental management system is voluntary and *ad hoc* (Spellerberg *et al.*, 2004) yet environmental leadership and commitment are paramount for the outcomes of change initiatives (Clarke and Kouri, 2009; Higgs and Rowland, 2005; Comm and Mathaisel, 2003). Despite their environmental skills and knowledge, neither Vicky nor Terry hold 'power over' others to implement the environmental management system; each holds 'power to' within their own Schools

yet Vicky chooses to act with subtle resistance to implementing certain low-level measures.

7.3 Swansea Metropolitan University

The individual cases below have been chosen from the eleven interviews completed at Swansea Metropolitan and comprise two Senior Lecturers, Rachael and Mathew; Karen, an undergraduate student and Ben, who is a post-PhD researcher.

7.3.1 Rachael, 'An Environmental Champion'

I begin with Rachael who has been a Senior Lecturer at the university for eight years. She is the Programme Director for an MSc course and also teaches on other undergraduate courses. Rachael lives just outside of Swansea and has to work until late as she teaches on evening courses several times a week.

Extract 1:

"Well my impression is that mainly it comes from the Environment Manager, now I don't know if that's the correct impression I assume senior management must have instructed her to I don't know deal with energy saving, but my impression is that it comes from her and some others in the Built Environment Dept, they certainly do talks at our staff development event once a year I only hear about it from them really so that's why I get that impression".

Extract 2:

Interviewer ~ As far as you know there are no set procedures issued by the school?

Rachael ~ "I don't think so, it's almost goodwill if you like, there's no penalty for not doing it as far as I know. I've been doing it so I don't know! No I'm sure there isn't. We do double sided photocopying & what have you, things like that. It's certainly easier with the new copiers, it used to jam a lot it was frustrating with double sided but seems ok now. So no I don't think it's changed all that much".

Extract 3:

Interviewer ~ Have you been impacted in a positive or negative way by the measures?

Rachael ~ "hmmm ok well last year, this academic year just gone, it came in a policy I don't know if it was for environmental reasons or not, but what they said was they were going to take printers from staff offices & we all had to print centrally so rather than have the convenience of having a printer here (on the desk) – I think partly it was the cost of the ink cartridges & that sort of thing. However, when you've got confidential stuff or it's just the time it takes to keep walking back & forth from the photocopier, it is quite an impact. So that's been a bit of a... to the point where this is a printer (in the office) paid for and run with my own money just for convenience sake really. When you're busy to run back & forth 20 times a day is a bit difficult so I don't know if that was an environmental motivation behind that or whether it was a cost, I'm not sure. So that's the major one I can think of".

Extract 4:

Interviewer ~ Do you drive to work?

Rachael ~ "Ah well last year I had a car crash & it destroyed my confidence a bit so I started to come to work by train. Now I kept that up for about 6 months or so but I had to stop really because of the train times. Not only do they move them about sometimes it's not convenient I do a lot of evening work. So generally speaking I do drive. But parking is an issue here, it certainly gets very crowded here – it's ok if you arrive at 8.30 but not at 5 to 9! Also at present there are no parking charges at the university, but there are plans to introduce parking fees. Now I'm not sure if this is an environmental or financial move. It's generally felt that there would be a loss of goodwill from the staff if charges were to be put in place".

Extract 5:

Interviewer ~ Do you feel there's a strategy with regards to environmental measures?

Rachael "Yes, I'd say yes. It's a lot more focussed now. Even 5 years ago, it's just an impression, but it did seem to be a bit *ad hoc* and would vary from School to School. But now it does seem to be a bit more cohesive, a lot more cohesive really - but yes it certainly feels a lot higher on the agenda than it used to be".

Interviewer ~ You feel there's strong environmental leadership?

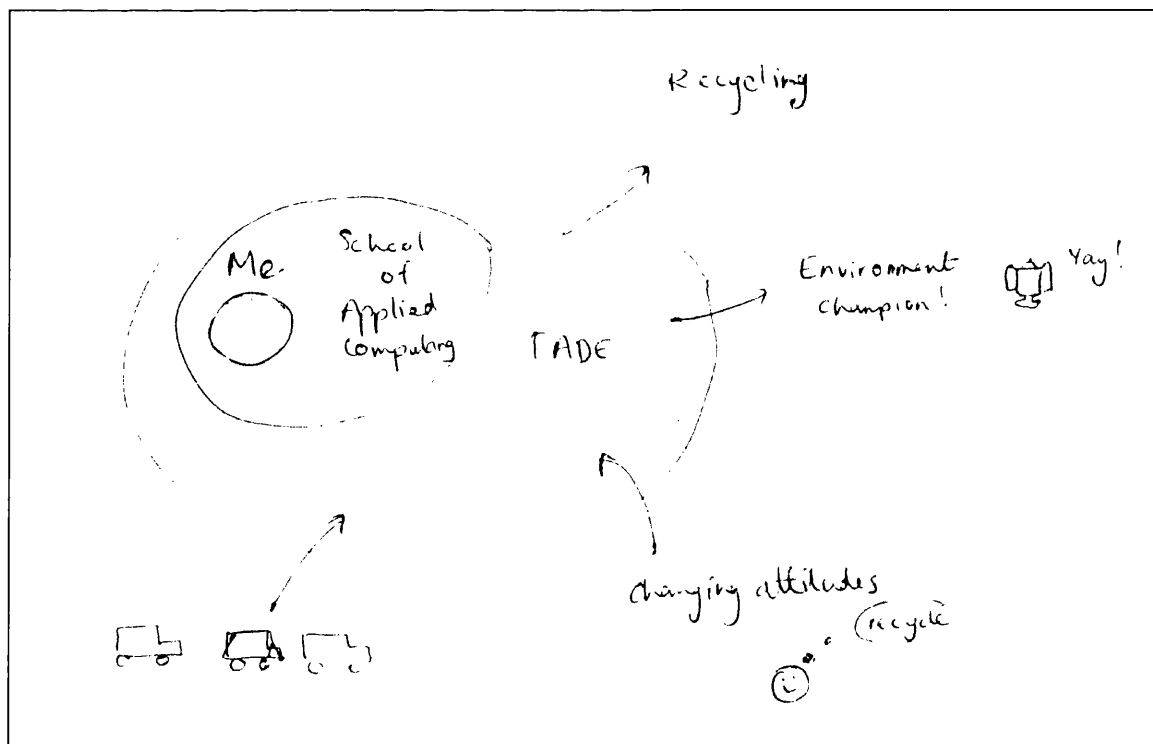
Rachael "I'd say the Environment Manager would be the main one so if I wanted to know anything about the Environment Policy I'd go to her, I can't think of anyone else I would ask. I get the impression that the Vice Chancellor is interested, but delegated to the Environment Manager. That's my impression but whether it's correct I'm not sure".

Rachael reveals that she is unsure as to the management of environmental management initiatives when she states 'I don't know if that's the correct impression'. This lack of clarity, ambiguity, surrounding the issue triggers her sensemaking (McCaskey, 1982, cited in Weick, 2001). Such uncertainty comes from ignorance due to the lack of a communicated environmental strategy. However, Rachael states that environmental management is more focussed than previously, indicating that the work of the Environment Manager is more visible than before. Due to the train time table she feels that she has no option but to drive to work. Her own work time table does not allow her to join the car share scheme as she requires flexibility, so finds it difficult to find a car park space unless she arrives early in the morning. With the University looking to introduce parking fees she feels this could cause friction between staff and university management. Rachael is unsure about the reasons behind the fees as she states '...I'm not sure if this is an environmental or financial move'. Her statement highlights ambivalence (Piderit, 2000; Plambeck and Weber, 2010) as the University proposes the fees to be an environmental benefit, yet Rachael implies a financial benefit for the University. Rachael also reveals her individual ambivalence as she is keen on recycling and the Environmental Champion awards, which are positive aspects, but not on the issues which might impact on her in a negative way, such as the proposed car parking fee. Her response follows Piderit (2000) whereby she reveals a cognitive response in conflict with an emotional response. Rachael also reveals subversive resistance in respect of the networked printers where she continues to use her personal printer despite admitting that the new printers are ideal for double-sided printing which helps to save paper. This can be likened to the 'foot dragging' resistance as proposed by Fleming and Spicer (2008:302) whereby Rachael is still holding on to her personal printer which she

does not want to dispose of despite acknowledging the benefits of the new, networked printer system. However, Rachael reveals her positive views on environmental management through her individual proactive activities and awareness of the issues and states that environmental management is 'a lot more focussed now' and 'more cohesive' with the Vice-Chancellor showing more interest than previously. This highlights the importance of leadership, commitment and support from senior management to implement environmental initiatives (Higgs, 2009; Comm and Mathaisel, 2003; Sharp, 2002).

Shown below is Rachael's drawing of herself within the University and her experience of environmental management initiatives, where she depicts herself positioned within her School and also as part of the wider University.

Figure 7.3: Rachael, 'An Environmental Champion', Swansea Metropolitan University



Rachael ascribes meaning to her experiences of environmental management through her image; a central part of the sensemaking process in line with Gioia *et al.* (1994). The image acts as a metaphor for Rachael's sensemaking of environmental management within the University in line with (Barner, 2008; Gioia *et al.*, 1994). Rachael identifies her work self as being within her School and Department and highlights certain environmental management issues which have impacted on her the most. Her sensemaking reveals retrospective thought processes of environmental management. Rachael does not show any of the environmental management aspects impacting directly on her but on to the University as a whole. Rachael highlights her frustration at the lack of car parking and using public transport, yet identifies the positives of increased recycling facilities as this saves her having to take recycling home. Through sensemaking Rachael identifies a change in attitudes and thought processes of University members towards environmental management. Rachael feels that attitudes are changing and that more of her colleagues are becoming more environmentally aware. Finally Rachael identifies her self as the Environmental Champion for her environmental attitudes and achievements; a positive issue for her against the negative impact of transport and car parking. The drawing provides a visual metaphor to help Rachael interpret her experiences and to make better sense of environmental management within the University (Barner, 2008; Gioia *et al.*, 1994).

7.3.2 Mathew, 'Energy consumer'

Mathew is a Senior Lecturer in Computing who teaches on undergraduate and masters degree courses and also supervises Masters students, along with his own research. He gained his PhD before starting work at the University where he has been for around three years. During this time he has always travelled to work by train.

Extract 1:

"I don't know the extent of the legislation when an institution like this would be required to meet certain targets. If that was the case then I'd fully understand you'd have to do that. On the other hand I suspect it might even be just saving money. I think saving money is probably a big driving force for a lot of people's mind particularly for management where ... what's the cost for having a printer for every lecturer & what's the cost for having 1, that's an obvious saving".

Extract 2:

Mathew ~ "The impression I get apart from the people who are actually trying to implement any of the initiatives, like the Environment Manager, the impression I get is that she's really the only one trying to get any of this message across, so in the 3 yrs I've been here nobody in my school myself included has actually been active in terms of I suppose of, er, devolving the responsibility where it is handed down from the main person who's in charge, so like from the Environment Manager here's the initiative, handed down to say the Heads of Schools so you guys can now devolve the sense of responsibility. So I suppose naturally you would see that happening but I don't get that impression at all".

Interviewer ~ So people are very much following what is coming to them rather than... there's not so much of a bottom-up initiative...?

Mathew ~ "Precisely - yes that's right. It's very much top-down but it's - it's not even top-down in the sense that you would expect the top, then it would filter down - it's more that's the top then you get the message then you take it or leave it, you know. It's not actually are you doing this or how are have you found this or - nobody's been around to discuss anything - 'how's this initiative going or how's the machine switch off thing going on'? None of that's happened".

Extract 3:

"I think in this Institution because of what people told me & because the Vice Chancellor loves saving money I would suspect it comes from him because he's very interested in saving money & stuff like that, so if at the end of each year he saves a £40,000 on his fuel bill or whatever it is then of course he's going to be very happy about that. So I think in turn he encourages people like the Environment Manager to get the message across".

Extract 4:

"Strategic I'm not sure - I think there are some sort of tactics going on so they certainly know what they would like to do but I don't get the impression that any of it is enforced with any I don't know what's the word with any strength or vigour I suppose. I mean it's you get the annual talk & that's all very great & you get the emails coming through & that reminds you it's not very sort of...I don't suppose they'd want to that but they don't enforce it with any ambition I suppose".

Interviewer ~ Do you feel there's strong environmental leadership from whichever level?

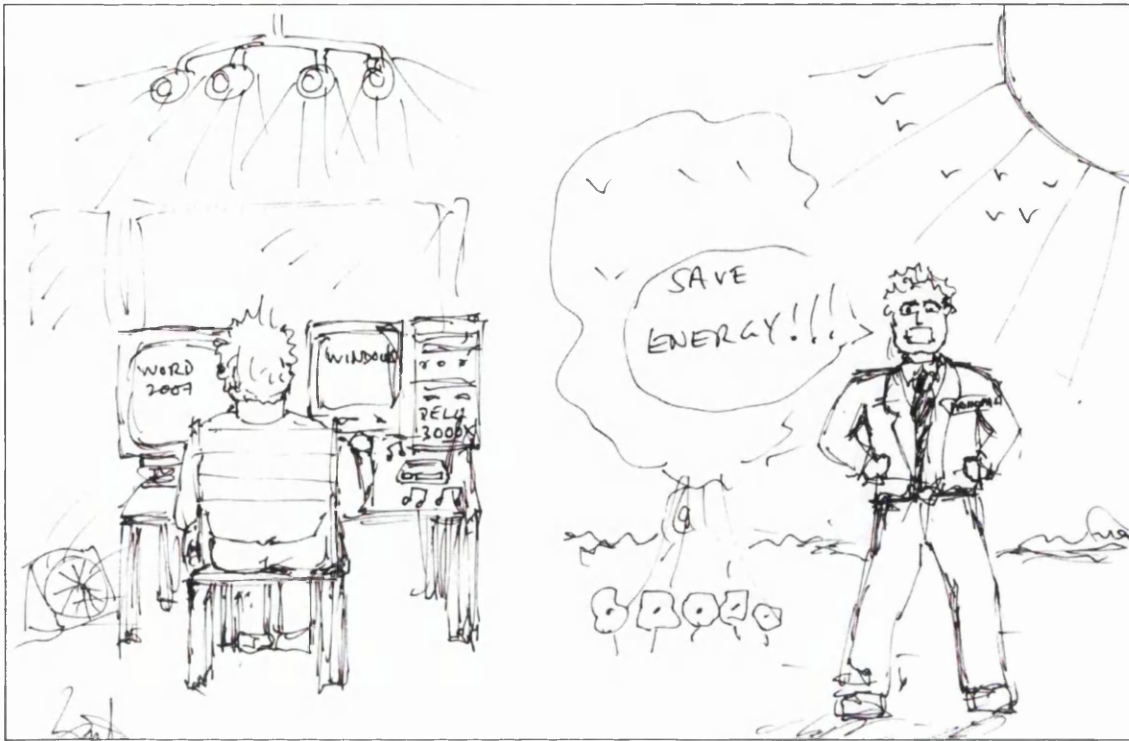
Mathew ~ "Um well yes & no I suppose. Yes in the sense they're obviously very keen to pass the message across they do a fair share of communicating some new schemes to people & they make the effort of giving all staff an annual talk & that person is always there if you need them if you need advice (Environment Manager), so there's a willingness there but in terms of implementation, the leadership of the implementation, again from a lecturer's perspective, my perspective there's probably not as strong as it could be shall we say. So it's yes & no, I think they know what they want to do & they know what's right for them to do perhaps - but in terms of how you implement that maybe they don't want to invest - because if you want to implement this stuff presumably you need people who are more hands on".

Through his sensemaking, Mathew identifies the autocratic management of the environmental initiatives in that the Environment Manager does not devolve responsibility or encourage others to instigate initiatives, following the explicit leadership style of Angus-Leppan *et al.* (2010b), along with the lack of urgency to implement any of the initiatives throughout the University; he gives a sense of voluntary implementation, 'take it or leave it'. This statement illustrates inadequate leadership as the internal barrier towards implementation proposed by Post and Altman (1994) and the adverse effects of negative leadership highlighted by Higgs (2009). When asked about whether he feels there is environmental leadership he replies 'yes and no' which reveals his own sense of ambivalence; the optimal compromise (Campbell, 1965, cited in Weick, 2001) in that the Vice-Chancellor is taking an interest but the measures are not enforced with 'vigour' or 'ambition'. This also provides an example of ambivalence on the part of the Vice-Chancellor himself, following Plambeck and Weber (2010), in that he is interested in environmental management for the benefit of the University through positive publicity but not enough to provide sufficient investment of time and money for implementation. From his sensemaking of environmental management, Mathew alludes to the

external drivers of legislation and government targets (Price, 2005; Clarke and Kouri, 2009), as well as the cost savings (Christmann, 2000) which are important to the Vice-Chancellor. Mathew reveals the autocratic leadership of the Environment Manager with no devolved responsibility, no individual action and no bottom-up initiatives. However, he also states that he is uncertain about the environmental strategy because of the lack of communication (Daly *et al.*, 2003; Lewis, 2007) and the voluntary application; there is no enforcement of measures revealing the ambivalence of leadership. Following Thomas *et al.* (2009) increased communication is key to improving people's engagement with activities. The University leadership understands what environmental measures should be taken; this is the public image, yet the leadership is resisting full implementation.

On the left of his drawing below, Mathew reveals his personal world of working at the University within computing; he has two computer screens on his desk, the lights are on and he has a sound system. All of which are energy-using equipment. On the right, the Vice-Chancellor is calling to everyone to 'save energy'.

Figure 7.4: Mathew, 'Energy consumer', Swansea Metropolitan University



The drawing enables sensemaking through visual metaphor (Gioia *et al.*, 1994) as Mathew provides an interpretation of his experience of environmental management (Barner, 2008). Through his sensemaking Mathew highlights the ambiguity of environmental management within the University. Mathew identifies the leader, the Vice-Chancellor, as giving the message to 'save energy' yet at the same time shows himself as a high-energy user at his desk. In his interview, Mathew admits that he does not need two computer screens but that this makes his work easier. Nobody is forcing him to cut down on his energy consumption at present which highlights the voluntary, *ad hoc*, nature of implementing initiatives. This situation follows Spellerberg *et al.* (2004) who highlight the dangers of *ad hoc* measures leading to low levels of implementation. On the opposite side from Mathew is the Vice-Chancellor who is urging everyone to save energy. The importance of communicating the message to 'save energy' is highlighted by Lewis (2000); Daly *et*

al. (2003); Elving (2005) and Frahm and Brown (2007) as effective communication is said to contribute to the implementation process, yet Mathew reveals uncertainty linked to a lack of communication. The drawing shows the Vice-Chancellor with the potential power to lead on environmental management but Mathew does not clarify whether the Vice-Chancellor has 'power over' members or 'power to' enable the implementation of environmental measures (Clegg, 1994; Karreman and Alvesson, 2009). The Vice-Chancellor is depicted as the leader yet *leadership* of the environmental management measures is lacking (Higgs, 2009; Clarke and Kouri, 2010; Comm and Mathaisel, 2003). The Vice-Chancellor wants to be seen to have a 'green' image through publicity, yet this is not backed-up by strategy and practice. Here Mathew depicts the problematic issue of people having become accustomed to using energy on IT equipment at home and at work, against how best for the University leadership to change this behaviour through incorporating environmental values into decision making (Halme, 2002; Post and Altman, 1994). Through his sensemaking Mathew shows that he has a clear understanding of this dichotomy.

7.3.3 Karen, 'The frustrated recycler'

Karen is an undergraduate student and has been the University for two years and as such she is able to give a 'student's eye view' of life within the University. Karen is personally interested in the concept of recycling and reusing materials. She lives in central Swansea and walks to the campus.

Extract 1:

Karen ~ "I'm not sure how it got started. They did have – I mean it's been there since I've been there – but they did have not so long back an Environment Week they were trying to raise awareness of recycling & all that & they had offers on like if you cycled to university then you could be entitled to enter this draw or something like that & they were giving things away like pens & all that kind of stuff & bits of paper – which I thought was a bit strange really they were giving bits of paper away encouraging people to recycle so I gave it back to the woman & said 'there's my recycling'! Yeah I just gave it back to her".

Interviewer ~ Do you know who specifically is organising that?

Karen ~ "I don't know who specifically is doing that but we do get emails to our student accounts, I know we have an Environment Officer or someone who organises all that – I could look it up to see who it is. On Freshers Week I did actually want to enrol I wanted to be part of the Society or whatever & the woman never got back to me, so I didn't bother chasing it up".

Extract 2:

Interviewer ~ So the lack of recycling is quite a negative point for you?

Karen ~ "Yes I think that because it's kind of like my friends always wanting to go to the canteen upstairs because we got kicked out the canteen downstairs because you're not allowed to take your own food in but of course that splits the group then & we didn't want half upstairs & half down there so it puts you in a position then. You either bring your own food or you have to buy this stuff. They do it downstairs so there's no reason they can't upstairs (recycling) maybe they just haven't got the facilities. But if they haven't got the facilities then they should at least use paper plates because you can recycle paper plates, & they haven't got any recycling for cans upstairs & that's a bit disappointing as well or for bottles & things. Which is really strange I don't know why the canteen downstairs has got all these facilities & the one upstairs hasn't, it's the same staff, you see the same staff in them".

Extract 3:

Interviewer ~ What would you say would be the main reason for the environment measures?

Karen ~ "Why? To reduce the impact on the environment! Because obviously with so many people there it could be quite huge, couldn't it. I mean there's things like lecturers come in & put lights on even though there's full sun in the room & things like that could be changed. It doesn't make any difference if you put lots & lots of strip lights on & there's sun in the room it's light enough anyway, it's just habit. Just little things like that, you know".

Interviewer ~ Do you feel there is strong environmental leadership?

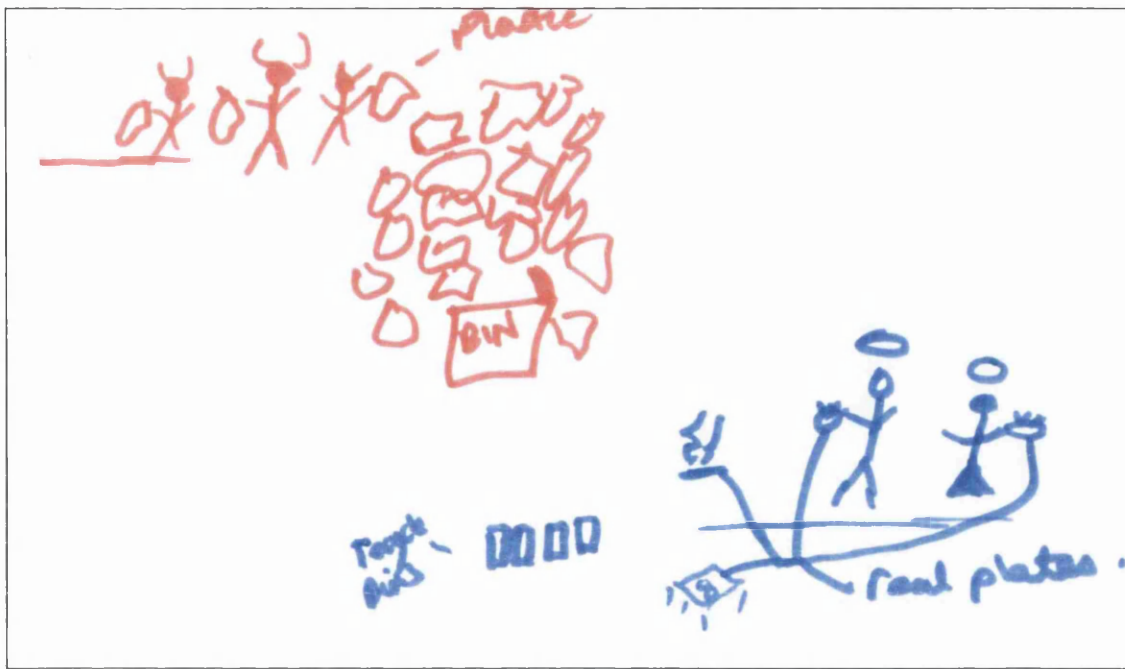
Karen ~ "Not really, not as far as I can see. No really 'cos it's like as I said before, when I put my name down to be in the Environment Group & I never heard anything, so if someone was really pushing it then they would grab the opportunity for anyone who did get in touch with them to get in touch & keep that ball rolling, you know. You can't really see anything that's being done - that's it really".

Karen identifies her self both as a student and as someone who is personally interested in environmental issues; her student and personal environmental values overlap. Karen is unclear as to who is responsible for environmental initiatives, highlighting ambiguity to trigger her sensemaking (Weick, 1995:91). Karen reveals that she is uncertain as to how environmental management initiatives got started because of the lack of clear communications; better communications to students could help them to engage (Frahm and Brown, 2007; Elving, 2005). Because of her environmental knowledge, Karen is aware of the impact of the University and the need to change member's behaviours; hence the need for a change strategy to develop an environmental culture and implement environmental management measures (Halme, 2002). Her environmental knowledge informs her resistance to use the canteens where she cannot recycle; a conscious act to enable recycling (Clegg, 1994). Karen reveals organisational cynicism through frustration and disillusion with several aspects of the environmental management initiatives. On the one hand, the University is trying to raise awareness to students about environmental issues but their lack of commitment to this has in fact had a negative impact on Karen. As she states, 'I did actually want to enrol...to be part of the Society...the woman never got back to me, so I didn't bother chasing it up'. This reaction highlights lost motivation to act (Wanous *et al.*, 2000). Karen is frustrated about the lack of recycling facilities in one of the canteens which impacts negatively on her and her friends and is

disillusioned with the low-level initiatives which are not being implemented, such as turning on lights in lecture rooms when they are not necessary. As proposed by Dean *et al.* (1998) and Andersson and Bateman (1997) , Karen's negative feelings towards the University and the frustration caused by these issues result in her becoming cynical about the environmental efforts at the University. Karen also shows 'subversive' resistance (Fleming and Spicer, 2008:302) to joining the Environment Society in that she 'didn't bother' chasing her application; reflecting the decrease in organisational citizenship associated with organisational cynicism (Rubin *et al.*, 2009). The data reveals a lack of environmental leadership and commitment to implementing low-level environmental initiatives, such as recycling in the canteens and for nurturing the environmental interests of students. Balogun (2006) points to the importance for senior management to remain actively involved whilst being mindful of the values and mind-sets of change recipients when implementing initiatives (Karp and Helgo, 2008).

In her drawing Karen demonstrates her frustration at the lack of uniform recycling in the canteens.

Figure 7.5: Karen, ‘The frustrated recycler’, Swansea Metropolitan University



In her drawing Karen utilises metaphor to bring meaning and understanding to the recycling process; good versus evil representing plastic versus reusable crockery. Barner (2008) advocates this use of metaphor to provide a ‘...vehicle for emotional expression’ (p. 123). In the drawing the red devils at the top portray those using the plastic, non-recyclable food containers which then are thrown away in general rubbish bins compared with those people with halos underneath using crockery which can be washed and re-used, along with the bins for recycled waste. The contradiction of the different facilities in the canteens provides a source of ambiguity following McCaskey (1982, cited in Weick, 2001) which triggers Karen’s sensemaking of the situation. Karen provides an ‘evaluative judgement’ from her experiences (Cole *et al.*, 2006) and her frustration and disillusionment regarding the facilities in the canteens result in her cynicism as she expresses her negative feelings towards the University (Dean *et al.*, 1998). Karen expresses her emotion through the use of drawing as visual metaphor; the devils using non-recycled plastics against those with halos who are more environmentally friendly. Thus the drawing enables

Karen to make sense of this situation and for her to better interpret what is taking place (Gioia *et al.*, 1994; Barner, 2008).

7.3.4 Ben, 'Sees no genuine motivation to act'

Ben is a Research Associate. Having gained his PhD at Swansea Metropolitan he has a three year contract to keep his research going, along with some teaching duties as well. He has been at the University for seven years.

Extract 1:

Ben ~ "Yes, well I suppose before those emails that we've been receiving for a while now we would not really think about it, but now personally now I switch off my computer every single night which I wouldn't do before. I suspect everybody does that now so before leaving I make sure the printer is off, all the screens are off and things like that. The only specific measure that I've seen lately is that those new bins we've got everywhere for plastic bottles, that's it really".

Interviewer ~ So things have changed a bit for you?

Ben ~ "Yes, but on a basic level. But it's little things that everybody can do. They are trying to change this now and in the future maybe a little bit more, but to start with it's just little things".

Extract 2:

Interviewer ~ What would you say would be the main reason for the measures?

Ben ~ "I would think first of all it's just to cut costs! The university is a business as well and it's a way of saving money, and it's their first aim I guess. But other than saving money I hope that people are really concerned about environmental problems and more & more people are talking about it which is a good thing and eventually a genuine will of changing will happen".

Interviewer ~ So more of a moral view?

Ben ~ "Yes but we are not quite there yet, but hopefully it will happen".

Extract 3:

Interviewer ~ So you don't think this gives people the encouragement to go further?

Ben ~ "It definitely gives encouragement but only that. Well I'm only saying this from what I'm seeing but I don't see a genuine true motivation from everybody to start talking about this & realising that big changes need to be done. Turning off computers is about it so far".

Extract 4:

Interviewer ~ Do you feel there have been problems implementing the initiatives?

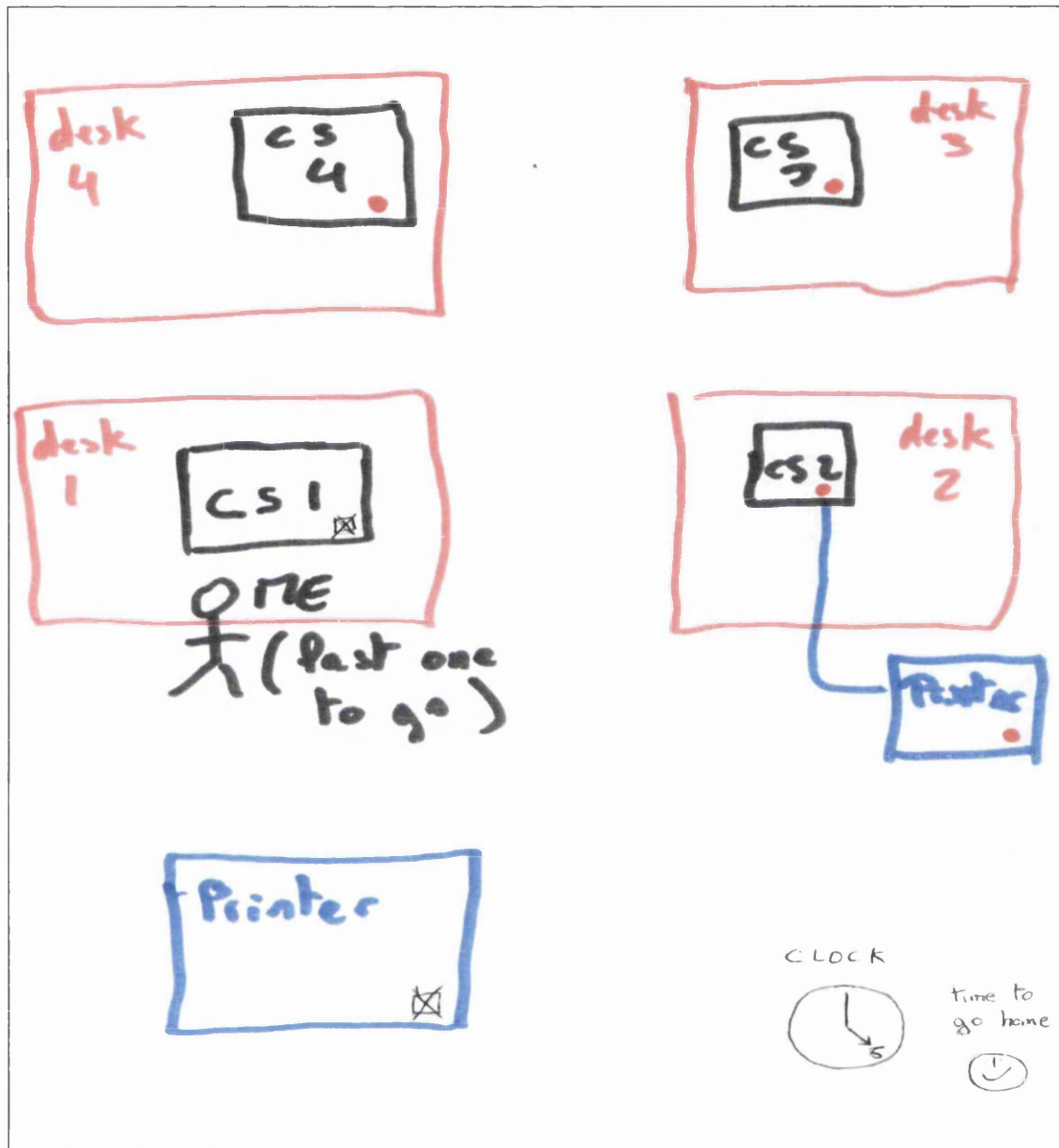
Ben ~ "I find it hard to answer that question because I don't really know what they want to achieve. They are doing something, yes, but is it more or less than they want to? I just don't know. If I knew what they wanted to achieve in the first place then maybe I could answer that question. Because I don't have that big picture I just don't know what's happening, nothing to compare against".

Ben tells us '...I don't really know what they want to achieve' which reveals a level of ambiguity in line with McCaskey (1982, cited in Weick, 2001) as measures of success to implement environmental management are not stated by the University. However, Ben reveals that he had not previously considered environmental measures before he started receiving communication via e-mail; he had become engaged to act through the communication (Thomas *et al*, 2009; Lewis, 2007; Daly *et al.*, 2003). In his interview, Ben retrospectively uses the process of sensemaking to reduce his uncertainty when he states that '...I just don't know what's happening, nothing to compare against' (Angus-Leppan *et al.*, 2010b). Ben feels that the environmental measures they are being asked to perform, such as turning off lights and equipment, are only basic initiatives and that much more needs to be done. He reveals a lack of leadership and commitment to the initiatives as there is no 'genuine true motivation' to start a discourse on the more difficult measures to be taken. Ben states that '...big changes need to be done' which require leadership and commitment to implement

(Higgs, 2009; Clarke and Kouri, 2009; Fisher, 2003). Kanter and Mirvis (1989, cited in Yuxia and Daniels, 2008) propose that cynicism tends to occur when organisations pursue profits over moral ideals. Ben recognises the external drivers to cut costs as the University is run as a business as well as the hope that people are ‘concerned about environmental problems’, expressing the cognitive / emotional responses of cost savings and ethical reasons (Plambeck and Weber, 2010). In Extracts 3 and 4 Ben states the need for a change in behaviours, yet there is no true motivation from leadership to do this (Diefenbach, 2007) as only small changes have taken place to date; the ‘low hanging fruit’ (Kurzinger, 2004). His sensemaking reveals ambivalence of leaders to implement initiatives as they recognise the need for changes yet they are reluctant to do so, thus revealing leader resistance to environmental management. However, Ben reveals his cynicism as a careful ‘evaluative judgement’ of the University in line with Cole *et al.* (2006) and Bedeian (2007).

In his drawing below Ben shows that he works in an office with three other people. All of the staff have a computer on their desks and there is a shared printer.

Figure 7.6: Ben, 'Sees no genuine motivation to act', Swansea Metropolitan University



In the drawing Ben reveals his work identity; sharing an office with three other people he is the last one to leave at 5 o'clock. Ben identifies him self as the person to turn off the computers and printers and as such, he takes individual action in doing so and as such, the drawing provides a visual metaphor for Ben to reveal his sensemaking of the situation in his office (Barner, 2008). There is no universal diktat to take responsibility to turn off equipment, only the general emails being sent round to remind people and Ben's personal belief that small energy saving measures such

as this need to be done. In this instance, communication has led to Ben becoming engaged in the environmental management initiative (Thomas *et al.*, 2009; Lewis, 2007). However, Ben does not hold any transitive power over his work colleagues to force them to turn off their own equipment (Clegg, 1989). As such, the implementation of these measures is voluntary, *ad hoc*, which Spellerberg *et al.* (2004) point to as being an inadequate process of environmental management implementation. Ben also reveals leadership ambivalence to implementation as University members are not forced, but reminded, about these initiatives. University leadership is said to play a key role in strategic outcomes and their ambivalent evaluation will impact on implementation (Plambeck and Weber, 2010). Following Diefenbach (2007), changing processes and routines helps to change attitudes towards environmental initiatives aided by better communications to involve people in the implementation process (Thomas *et al.*, 2009; Daly *et al.*, 2003).

7.3.5 Swansea Metropolitan University Summary

This analysis highlights that sensemaking is not shared (Weick, 1995; Brown *et al.*, 2008) as these four individuals relate retrospectively to different aspects of environmental management, making sense in their individual ways (Rhodes and Brown, 2005). The data is aligned with the first-level analysis themes of environmental leadership, drivers, individual action, competitive advantage and environmental image. Each individual has provided an image to give meaning to their understanding of the environmental management initiatives from their retrospective sensemaking; the visual metaphors enabling sensemaking and interpretation (Gioia *et al.*, 1994; Barner, 2008). These individuals shape their

identities through discursive practices, some bringing their personal identities into play whilst at work through their environmental knowledge.

In line with McCaskey's (1982, cited in Weick, 2001) characteristics of ambiguous situations Ben reveals that he cannot measure the success of the initiatives as there are no goals or objectives for him to relate to, whilst Rachael, Mathew and Karen state that their uncertainty of environmental management arises from a lack of communication to engage them and to help change attitudes (Rubin *et al.*, 2009; Thomas *et al.*, 2009; Allen *et al.*, 2007; Burnes, 2009). Importantly, Ben states that the communication that he did receive helped him to engage with the low-level initiatives which he performs.

Mathew, Rachael and Ben relate to cost reduction as a driver for initiatives (Christmann, 2000) whilst Ben hopes that there is some concern about the environmental problems, highlighting the cognitive / emotional motivations to act (Plambeck and Weber, 2010). Mathew also relates to the vague roles and responsibilities of staff and management as these are not devolved down from senior leadership, pointing to the autocratic management style of the Environment Manager which is aligned with an explicit leadership style, as noted by Angus-Leppan *et al.* (2010b). However, both Ben and Mathew comment that the leadership from senior management is *not* explicit; Ben states that there is 'no genuine motivation' and Mathew feels that initiatives are not enforced 'with ambition'. These comments also indicate a level of uncertainty regarding the situation due to the lack of direction and environmental leadership, in line with the findings of Weick (1995) and van der Heijden *et al.* (2010).

The data reflect the ambivalence of senior management towards environmental management initiatives, as proposed by Campbell (1965, cited in Weick, 2001) whereby Mathew, Ben and Rachael point to the interest of the Vice-Chancellor in implementing environmental management initiatives yet there is little evidence of senior leadership. Environmental measures are seen as a positive impact for the University as they are used to create a 'green' image through publicity, but the negative side of this is the required investment of time and money. Such leader ambivalence is said to affect strategy and the outcomes of initiatives (Plambeck and Weber, 2010). This ambivalence also points to senior management resistance as highlighted by Dunphy *et al.* (2007) who highlight that senior management can be as resistant to change as others lower down the organisation.

Mathew himself reveals his ambivalent views of the leadership; his 'yes and no' answer being the 'optimal compromise' (Campbell, 1965, cited in Weick, 2001:377). Rachael reveals her individual ambivalence whereby she is crowned as Environmental champion for her work, yet she views the use of network printers and car park fees as a negative impact (Piderit, 2000; Randall and Procter, 2008). Overall there is very little resistance to the environmental management measures in place. Rachael is the only one to resist the networked printers through the subversive use of her personal printer (Fleming and Spicer, 2008), and hints of the possible loss of goodwill from introducing car parking fees. Her statement points to the decreases in organisational citizenship associated with organisational cynicism (Rubin *et al.*, 2009). Karen also states her negative feelings, frustration and disillusionment towards the environmental initiatives (Andersson and Bateman, 1997), revealing her lost motivation towards joining environmental activities (Wanous *et al.*, 2000). Clegg

(1989) highlights the relationship between knowledge, power and action whereby actors have the capability to either do something or refrain from doing something. In this research, Karen uses her environmental knowledge to take action on recycling as she refuses to use the canteen where recycling is *not* available.

7.4 Chapter Summary

This Chapter discussed individual sensemaking of the environmental management system and environmental management measures at the post-1992 universities of Glamorgan and Swansea Metropolitan. These eight individuals have retrospectively developed their sensemaking from the ambiguous characteristics which exist in each of the universities (McCaskey, 1982, cited in Weick, 2001). Most of the interviewees have tried to understand their experiences through the use of visual metaphor to better interpret and make sense of the environmental management implementation process (in line with Barner, 2008; Gioia *et al.*, 1994). As proposed by Weick (1995), sensemaking is “...grounded in identity construction” (p. 17) as actors seek to make sense of events in individual ways (Rhodes and Brown, 2005; Brown *et al.*, 2008); thus sensemaking is not shared as actors develop new meaning and interpretations (Balogun and Johnson, 2004).

The data highlight the need for Glamorgan and Swansea Metropolitan universities to learn to incorporate environmental values into their decision making (Halme, 2002; Post and Altman, 1994), through effective environmental leadership to implement and enforce an environmental management culture. Following Nordvang *et al.* (2009), effective internal communications could positively affect the implementation of environmental initiatives, alleviating the ambiguity faced by individuals. Ben

(Research Associate, Swansea Metropolitan) states that he does not know what the University leadership wants to achieve with respect to environmental management initiatives, highlighting the lack of goals and objectives. In his role as a middle manager, Kevin (Student Administrator, Glamorgan) is also not given goals and objectives for environmental management as the issue does not arise in his School administration meetings.

Instead, interviewees highlight the voluntary, *ad hoc*, implementation and practice of initiatives identified by Spellerberg *et al.* (2004) as being inadequate for purpose. Both Vicky (Senior Lecturer, Glamorgan) and Terry (Head of Doctoral Programmes, Glamorgan) state that the ISO 14001 environmental management system at Glamorgan is not being fully implemented; as Vicky points out ‘...but I don’t see the implementation’ (of the environmental management system) and Terry states that ‘...it’s voluntary, peripheral’. In addition, Ben (Research Associate, Swansea Metropolitan) speaks of ‘encouragement’ to go further, implying a lack of environmental vision from leadership. This emergent strategy is in line with the implied framework for environmental management implementation (Angus-Leppan *et al.*, 2010b). Higgs (2009), Clarke and Kouri (2009), Fisher (2003) and Post and Altman (1994) all propose the view that leadership and commitment are essential for change initiatives, with Sharp (2002) highlighting the need to gain senior management support. The data reveal that the Directorate at Glamorgan University took the initial decision to implement the environmental management system; however, Terry suggests that there is a strong emergent strategy with no senior management buy-in. At Swansea Metropolitan University, Mathew (Senior Lecturer) relates to the lack of urgency and that whilst the Vice-Chancellor is taking an

interest, the publicity of environmental management initiatives takes precedence over the enforcement of putting these into practice.

The negative effects of leadership lead to instances of organisational cynicism as highlighted by the frustrations and negative feelings towards the universities (Dean *et al.*, 1998; Andersson and Bateman, 1997). Karen (Student, Swansea Metropolitan) shows her frustration and negative feelings towards the University regarding recycling facilities in the canteens, perceiving the University as being unmotivated to act on this issue (Wanous *et al.*, 2000). Kevin (Student Administrator, Glamorgan) reveals his frustration regarding the meetings he has to attend at 9 o'clock, which result in him having a more difficult commute to work on the motorway. The organisational cynicism from both of these interviewees in turn shows a decrease in organisational citizenship and negativity towards their university (Rubin *et al.*, 2009). Both the leadership and senior management reveal ambivalence towards environmental management as being a positive and negative benefit to the Universities (Piderit, 2000). Campbell (1965, cited in Weick, 2001) calls this the 'optimal compromise' as leaders acknowledge the positive benefit of environmental management for their University yet regard the issue of investing resources for full implementation as a negative benefit. Interviewees reflect this compromise in that whilst leaders are taking an interest in environmental management, they are not fully committed to implementing the measures. The ambivalence of leadership towards environmental management can be construed as resistance to its implementation; subtle, 'foot dragging' resistance in line with Fleming and Spicer (2008).

There is little sense in the data of the concepts of 'power over' others or 'power to' enable actors to engage in particular ways (Karreman and Alvesson, 2009). The data *does not* reveal the University leadership as relying on 'legitimate' power to enforce environmental management on members (Clegg, 1989; Hardy and Clegg, 2006). Yet power is socially constructed from a member's identity, their environmental skills and knowledge (Knights and Vurdubakis, 1994; Brown *et al.*, 2010). Terry (Glamorgan) *does not* use his environmental knowledge as 'power to' progress the implementation of the environmental management system, whilst Karen (Swansea Metropolitan) uses her environmental knowledge as 'power to' refrain from using the canteen without recycling facilities. The resistance revealed in the data is that of subtle, 'foot dragging' in line with Fleming and Spicer (2008), whereby Rachael (Swansea Metropolitan) and Kevin (Glamorgan) resist implementing low-level measures such as using a networked printer and joining a car share scheme.

These eight university members highlight the ambivalence to implementing environmental management initiatives by University leadership in line with Campbell (1965, cited in Weick, 2001). The leadership shows its ambivalence as a blend of knowledge and doubt; leadership is aware that environmental initiatives should be implemented but that there is not the will to do so. Such ambivalent evaluations are said to affect strategic processes and outcomes for change implementation (Plambeck and Weber, 2010).

Chapter 8: Discussion and Conclusion

8.1 Introduction

The aim of this thesis was to explore the implementation and practice of environmental management within universities in South Wales through the sensemaking of individual members. Through the empirical research undertaken at four case study universities, this thesis brought a different perspective for assessing environmental practice by focusing on individual sensemaking, thereby contributing to the scant research on individual sensemaking of environmental management within universities. As such, this thesis provided a unique contribution to the existing debate on sensemaking through the exploration of the experiences of university members of environmental management implementation. This research has been achieved through an interpretive methodology, employing semi-structured interviews and the innovative technique of visual images; the images aiding sensemaking through metaphor and symbolism.

This thesis provided a unique focus on environmental management within the Higher Education sector in comparison to contemporary research in Corporate Social Responsibility within banking and manufacturing. As such, this research highlighted the ability of universities in South Wales to promote environmental thinking and ways of working in line with the drivers applied to the Higher Education sector through UK legislation and Welsh Assembly Government strategies. In addition, this research has provided a unique contribution to individual sensemaking through the exploration of the implementation of environmental management change events within universities. Individuals in this research have retrospectively interpreted their

experiences, developing new meanings, whilst visual images employed as data provided a vehicle for emotional reactions to change events.

This research highlighted the problems encountered within these case study universities regarding change management implementation and practice. One of the issues encountered was that of how to engage individuals with environmental management initiatives. Research findings suggested a need for the emphasis of environmental management as a change initiative. This situation arose from the universities not having a clear environmental vision and strategy which led to a lack of engagement by individuals. In turn, this research found that the lack of effective communication of environmental management initiatives led to a lack of awareness by individuals.

Through individual sensemaking the negative effects of organisational cynicism during change events was highlighted. Individuals revealed frustration and disillusionment with the slow pace of environmental management implementation and practice. Organisational cynicism was found to arise from the need for individuals to be engaged with the process to ensure awareness and active participation. Individual sensemaking pointed to the ambivalence of both individuals and university leadership towards environmental management.

This final Chapter brings the thesis to a close by exploring the implications for future environmental practice within universities. This research demonstrates that environmental management is currently not enforced within these case study universities; environmental management is voluntary and *ad hoc*, which implies that

UK environmental legislation and Welsh Assembly Government strategies are not driving implementation and practice as they should. In addition, the case study universities presented in this thesis lack environmental leadership; university leaders are not communicating their environmental management vision and strategy to members, which in turn is shown to lead to the dysfunctional behaviour of organisational cynicism with ambivalence on the part of individuals and leadership towards environmental management initiatives. To conclude this thesis, this Chapter discusses the contribution to existing management literature of the implications for environmental management within universities through individual sensemaking. This research identifies the negative effects of organisational cynicism and ambivalence, and highlights leader ambivalence which acts as an obstacle to environmental management implementation in universities. This Chapter offers a critical assessment of the research conducted and its implications for further research and practice.

8.2 Consideration of Implications for Practice

There are on-going implications for environmental management within the Welsh context; recent changes include reduced public funding and the pressures to reduce costs within the higher education sector in Wales. The Welsh Assembly Government announced in December 2010 that there would be a reduction in the number of universities in Wales from the existing eleven universities down to six by 2013. As a first step towards this restructuring process, the merger of three universities was announced in February 2011. The three existing universities of Swansea Metropolitan, Trinity Saint David and University of Wales Institute, Cardiff, will join under the University of Wales Charter to create a new 'super' university (Evans, 2011). This new university will be known as the University of Wales and will

become the third largest university in Wales behind Cardiff University and Glamorgan University. This merger will act to heighten competition across the sector. Welsh universities have been told to 'adapt or die' (Evans, 2011) by the Welsh Assembly Government to ensure that Wales remains competitive within the global market for higher education. However, it is as yet unclear as to how such mergers will impact on the implementation of environmental management initiatives within future and existing universities. This research argues that environmental management initiatives can reduce running costs for universities, and with cost savings a priority for the Welsh Assembly, it remains to be seen if cost reductions will be linked to implementing environmental management measures. Given the emphasis on cost reductions, an important future initiative would be for the Welsh Assembly to provide a clear environmental strategy for the Higher Education sector; one which would seek to reduce resource use and hence carbon emissions through specific targets. By being allocated specific targets, universities could then aspire to following a bespoke sector 'declaration' of intent.

This research highlights the practical implications for environmental management; individual sensemaking reveals the need to enhance environmental thinking and ways of working within universities. In order to invoke an environmental culture, individual members need to be engaged and to be encouraged to become involved in putting environmental management initiatives into daily practice. Some individuals are already engaged in environmental ways of working; in this research these members are termed 'interested individuals'. Alternatively, universities need to engage individuals to become involved through promoting environmental

management as a change event. There are several ways for universities to facilitate a change towards environmental thinking, as discussed in this section below.

It is important for environmental initiatives to be communicated effectively to individual members. In this research it is shown that blanket, 'all staff', emails are not an effective communication method. In fact, this method is shown to alienate members who are often overloaded with email communication. A much more effective form of communication is that of dialogue during face-to-face meetings, taking the form of focus groups, workshops or environmental networks. Focus groups and workshops provide the opportunity to create awareness for individuals who would not otherwise engage in environmental issues. There is a need for individuals to become involved, to 'buy-in' to environmental thinking in order for them to accept basic initiatives such as recycling, turning off lights and equipment or using alternative modes of transport to work instead of cars. Alternatively, environmental networks aid communication of environmental management measures through disseminating ideas and information. These networks tend to be made up of Environmental Champions who are interested individuals, brought together to inform colleagues and to gently enforce environmental ways of working; facilitating participation in initiatives. Where there is a member of the network within a Department or School, this person is able to remind others of initiatives through putting up posters around the building and through informal discussions. Individuals are also able to engage in the implementation process by providing bottom-up feedback through the network up to management. This feedback is helpful to find out which initiatives are easy to implement and work well compared to those which are not working well. It is also important for interested individuals to have a focus and to

feel that environmental management is progressing. This research finds that interested individuals can become disaffected through what they perceive as inaction on environmental issues. By providing focus groups, workshops and an environmental network such individuals can engage with others to enhance awareness and knowledge of environmental issues. Awards given for environmental behaviour provide another incentive for environmental ways of working, rewarding positive behaviours. Such awards can benefit the university through individuals changing their behaviours to include changing their mode of transport to work, recycling more and using fewer resources such as paper, water or electricity. Awards can provide a focus for interested individuals who practice environmental behaviours and also offer an incentive for those who are gaining environmental management skills for the first time.

University leadership is urged to provide a solid basis for environmental management implementation and practice through a balanced mixture of environmental leadership and individual action. Members need to be engaged through communication and positive reinforcement of behaviours, with leadership providing a clear environmental vision and strategy. University leadership should look to create awareness in order for environmental thinking and ways of working to permeate throughout the organisation. With this in mind, university leaders are minded to look to use this research to enlighten their environmental thinking; to gain vital environmental skills and knowledge and to gain critical aspects of environmental management implementation.

8.3 Environmental Leadership within Universities ~ A General View

Across the UK, university leadership is facing the challenges of ‘new managerialism’ (Deem and Brehony, 2005) in that universities must now act strategically as they are becoming more accountable to society (Gioia and Chittipeddi, 1991). Whilst Higgs (2009) and Comm and Mathaisel (2005) call for strong environmental leadership, the current leadership revealed in this research needs to become more committed to achieve effective environmental management implementation (Lozano, 2006; Dunphy *et al.*, 2007; Clarke and Kouri, 2009). One particular issue highlighted in this research is that of poor communications from leadership to university members. Communication plays an important role within organisational change activities and is key to gaining individual involvement in the process (Lewis, 2007; Daly *et al.*, 2003; Frahm and Brown, 2007). This research suggests the lack of an environmental vision and strategy being communicated to university members. The universities in this case study require transformational leadership to facilitate and influence the change process to implement environmental management (Klarner *et al.*, 2008; Karp and Helga, 2008). The negative leadership revealed in this study is shown to be having an adverse effect on implementation and on university members themselves (Higgs, 2009), and as such leads to disillusionment and negative feelings towards the leadership of environmental management, creating instances of organisational cynicism. With some individual members being ambivalent towards environmental management, it is the role of leadership to overcome this negative response to the implementation of change initiatives. However, this research also reveals leadership ambivalence towards environmental management implementation.

It is important for the university leadership to understand the reasons behind the instances of organisational cynicism and ambivalence, and the harming effects to the university caused by these dysfunctional attitudes (Avey *et al.*, 2008). This research reveals instances of frustration and disillusionment in line with Andersson and Bateman (1997), along with decreased motivation towards environmental management implementation (Wanous *et al.*, 2000; Dean *et al.*, 1998). However, such negative experiences concerned with environmental management can evolve into a wider, and potentially more harmful, negative attitude towards the university as an employing organisation (Bedeian, 2007). Thus individual responses to change events can be complex, resulting in ambivalent evaluations which can effect the outcome of strategic processes (Piderit, 2000; Plambeck and Weber, 2010). This research reveals ambivalence towards implementing environmental management on behalf of university members and, more importantly, university leaders. Piderit (2000) points to ambivalence manifesting as resistance towards change and the important role of leadership to shape the change vision and strategic outcomes. It is therefore the role of university leaders to create a vision and to communicate the strategy for environmental management to negate instances of organisational cynicism and ambivalence.

8.4 Conclusion

This thesis provides a unique exploration of managing change events, such as the implementation of environmental management initiatives, within universities. Through an analysis of individual sensemaking (in line with Weick, 1995; Weick *et al.*, 2005) this research contributes to the existing literature on the implications for leadership of managing change within universities and highlights the adverse impacts

from the negative behaviours of ambivalence and organisational cynicism during change processes. To enable this research, this thesis provides a cross-disciplinary aspect through the bringing together of diverse literature; the thesis interrogates the literature of managing change processes and of environmental management within organisations which is then applied to the university context.

8.4.1 Implications for Implementing Environmental Management in Universities

This research highlights the important role of leadership within universities to create an environmental vision and strategy, following Comm and Mathaisel (2003; 2005), Lozano (2006), Sammalisto and Brorson (2008) and Clarke and Kouri (2009). As Shriberg (2003) and Dahle and Neumayer (2001) argue, university leadership needs to be strong by way of a clear vision whilst leading the change in ways of thinking. The management literature highlights the importance of leadership during change events as the behaviour of leadership has a profound effect on the outcomes of change initiatives (Higgs, 2009; Dunphy *et al.*, 2007), with those who lead organisations being ultimately responsible for driving change initiatives (Comm and Mathaisel, 2005). Higgs (2009) highlights the adverse impact of negative leadership on change implementation. The perturbing aspect of this research is the prevalence of obstacles to implementing environmental management initiatives from a lack of strong leadership; each case study university provides examples of internal barriers to change (in line with Post and Altman, 1994). At Cardiff University the middle manager tasked with implementing the environmental management system has the technical competencies for this role, but as yet does not enjoy the full commitment of the University leadership to provide appropriate backing; in comparison, the

Environment Engineer at Swansea University is more reliant on voluntary, *ad hoc*, initiatives by individual members, with little or no commitment from the University leadership to implement environmental management on a more official basis. Within the post-1992 universities, the Directorate at Glamorgan University took the important initial decision to implement a certified environmental management system as far back as 1999, yet the management system has not been put into operation across the University due to the lack of commitment to do so. Finally, whilst the Environment Manager at Swansea Metropolitan University is proactive and enjoys backing from the Vice-Chancellor for low-cost initiatives, the ‘low hanging fruits’ (Kurzinger, 2004:246), the University leadership is still not fully committed to environmental management. As such, the data presented in previous chapters suggests a lack of environmental awareness and some reluctance on the part of university leadership to embrace environmental thinking (Lozano, 2006; Dahle and Neumayer, 2001); leadership has not provided the vision and strategy required to fully implement environmental management initiatives. This research highlights leadership reluctance which leads to a lack of formal systems and procedures in all four case study universities, relying instead on *ad hoc*, voluntary initiatives to implement environmental management (Spellerberg *et al.*, 2004; Christensen *et al.*, 2009), and as such provides examples of the adverse impacts of negative leadership on change processes (Higgs, 2009).

Obstacles to implementation for leadership to overcome include the complex management structure of universities (Spellerberg *et al.*, 2004; Velazquez *et al.*, 2005; Ferrar-Balas *et al.*, 2009), whilst Gioia and Chittipeddi (1991) and Lozano (2006) highlight conservatism and an unwillingness to change which are apparent in

universities. Whereas this research does not overtly explore university management structures and outcomes, the data suggests that the characteristics of unique decision-making structures (Clarke and Kouri, 2009) and being resistant to change (Dearlove, 2002) result in slow and incremental change (following Stephens and Graham, 2010). However, all of these case study universities are facing reduced public funding and pressures to cut costs, which accentuates the concept of new managerialism discussed in this thesis. Both Dearlove (2002) and Deem (2003) argue for the need for changes in higher education due to external pressures. As the Welsh Assembly Government strives for greater efficiencies within the higher education sector, this implies that new managerialism will be brought to the fore by importing ideas and practices from the private business sector to improve efficiency and effectiveness (Deem and Brehony, 2005). With environmental management initiatives being shown to result in cost savings (Christmann, 2000), universities should be looking to become more competitive through efficiencies gained from financial savings, due diligence and an environmentally responsible image (Clarke and Kouri, 2009; Studer *et al.*, 2006). Thus there are increasing pressures for the Welsh Assembly Government to work with universities to help them remain competitive through environmental management initiatives.

This research contributes to the understanding of managing change in universities through exploring the barriers and obstacles to environmental management implementation. Through individual sensemaking of environmental management initiatives, the university leadership is highlighted as a barrier to implementation due to their reluctance to fully implement and operationalise environmental management initiatives. Although the importance of leadership within universities is discussed in

the existing management literature (Comm and Mathaisel, 2003, 2005; Sammalisto and Brorson, 2008; Clarke and Kouri, 2009), this research provides a unique contribution to managing change events within universities in South Wales through the exploration of individual sensemaking. Through interpreting the experiences of university members, this research investigates the processes of environmental management implementation and practice.

8.4.2 The Negative Effects of Organisational Cynicism on Managing Change within Universities

The construct of organisational cynicism is being paid ‘increased scholarly attention’ (Rubin *et al.*, 2009:680) due to the negative effects on organisations from such dysfunctional behaviours (Avey *et al.*, 2008). Fleming and Spicer (2008) suggest an increase in the ‘quotidian variants’ (p. 302) of behaviours such as “...cynicism, foot dragging, dis-identification” (*ibid.*) as subtle forms of resistance within organisations. Similarly, Brown and Cregan (2008) argue that change processes bring about increased levels of organisational cynicism and, given the role of leadership being to facilitate change (Kanter *et al.*, 1982, cited in Burnes, 2009), it is important for university leadership to acknowledge and understand the consequences of this dysfunctional behaviour (Plambeck and Weber, 2010). It is the responsibility of university leadership to overcome instances of organisational cynicism as negative experiences can evolve into wider, and potentially more harmful, negative attitudes towards the university as an employing organisation (Bedeian, 2007). In this research, the drawings as visual metaphors provide a diverse illustration of organisational cynicism, ranging from the frustration and disillusionment of Darren (PhD student, Cardiff), Karen (Student, Swansea Metropolitan) and Lorna (Lecturer,

Swansea) to the 'evaluative judgement' (Cole *et al.*, 2006) of Terry (Head of Doctoral Programmes, Glamorgan) and Rachael (Senior Lecturer, Swansea Metropolitan). As such, the visual data has enabled individuals to 'give voice' (Barner, 2008) and to present the 'unconscious' (Nossiter and Biberman, 1990) aspects of their experiences, providing a unique view of environmental management within the case study universities.

Organisational cynicism is variously defined as being "...a negative attitude towards one's employing organisation" (Abraham, 2000:269), causing feelings of frustration and disillusionment (Andersson and Bateman, 1997) which lead to negativity and decreased motivation towards change (Wanous *et al.*, 2000). Organisational cynicism towards change processes is evident within higher education institutions (Yuxia and Daniels, 2008; Bedeian, 2007), and the 'critical appraisals' (Bedeian, 2007:11) of environmental management implementation are apparent within this research. Organisational cynicism is revealed in this research as frustration and disillusionment by individual members towards university leadership for their role in implementing environmental management, or to be precise, frustration towards the lack of implementation. Organisational cynicism results from the lack of environmental leadership to provide a vision and strategy to fully implement the Environment Policies already in place. Whilst this negative attitude impacts on the implementation of change events, it is imperative for university leadership to understand the negative effects on the university as a whole; organisational cynicism can have prolonged negative effects on job satisfaction, commitment and motivation (Rubin *et al.*, 2009). Through the interpretation of interview and visual data, this research highlights the negative effects from frustration and disillusionment towards university leadership

and towards the university as an employer caused by the lack of environmental leadership.

8.4.3 Individual Ambivalence to Environmental Management

The complexity of individual responses to change events is compounded by ambivalence to change. Ambivalence is described as the variances within individual responses to change processes (Randall and Proctor, 2008; Piderit, 2000). University member ambivalence towards environmental management is revealed in this research as a simultaneous negative and supportive view, in line with Plambeck and Weber (2010). This research has shown that individuals are found to comply with certain environmental management initiatives, but are against complying with other initiatives. One example of this ambivalent response is that whilst recycling was easy for individuals to carry out during work time, using public transport or walking to work impinged on their personal time outside of work, thus creating a simultaneous positive and negative response to these environmental management initiatives. Piderit (2000) highlights the prevalence of ambivalence within individuals' responses to change processes which can affect the outcomes of strategic processes and argues that ambivalence manifests as resistance towards change; a subtle form of resistance in line with Fleming and Spicer (2008). Thus ambivalent responses can negatively impact change outcomes. To overcome ambivalence, positive action from university leaders can influence change outcomes as "...increased buy-in emerges through minimising ambivalence towards change" (Moon, 2009:518); emphasising the important role of university leadership to shape the change vision and strategic outcomes. With the prevalence of ambivalence towards change processes (Piderit,

2000), this research highlights the role of university leadership to negate ambivalent responses to environmental management implementation.

8.4.4 Leadership Ambivalence to Environmental Management

In addition to individual organisational cynicism and ambivalence, importantly this research also suggests the existence of a latent resistance in the form of ambivalence by university leadership. As such, the ambivalence of university leaders is acting as an obstacle to implementing environmental management initiatives. Piderit (2000) argues that research ignores management as resisters, whilst Rubin *et al.* (2009) highlights the attention paid to employee resistance to change with few studies concentrating on the impact of leader resistance. Through individual sensemaking, this research contributes to the existing literature on the subtle forms of resistance (Fleming and Spicer, 2008) as ambivalence by university leadership.

By revealing simultaneous positive and negative responses through individual sensemaking, this research highlights the ambivalence of university leadership to environmental management. Whilst all of these case study universities have in place an Environment Policy, and in the case of Glamorgan, a fully certified environmental management system, these are not being fully implemented and put into practice. In this respect, the university leadership acknowledges the need for an Environment Policy yet does not have the will to implement this. Here, the university leadership response involves both a positive and negative evaluation of environmental management. This leadership response to environmental management can also be likened to Campbell's (1965) 'optimal compromise' (cited in Weick, 2001:376), whereby ambivalence is seen as a blend of knowledge (the need for Environment Policy) and doubt (reluctance to implement Policy). This research suggests that it is

the ambivalence of university leaders which is acting as an obstacle to implementation; the reluctance of leadership to implement environmental management initiatives manifests as latent resistance to change (in line with the subtle resistance of Fleming and Spicer, 2008).

8.5 Reflections

Due to the personal interest taken in the topic of environmental management, the researcher is aware of her involvement and influence on this research process and that her interpretation of the data is but one of many possible interpretations (following Denzin and Lincoln, 2005; Yanow and Ybema, 2009; Blaikie, 2000, cited in Mason, 2002). Within her interpretation, the researcher is also aware of researchers questioning themselves; conscious of self as being both the inquirer and respondent. Before engaging on this research, the researcher was of the opinion that change management processes would be implied in that each case study university was instigating a change management event to implement environmental management. However, it became apparent early in the research process that university leadership *was not* promoting environmental management as a change event within their respective universities. At Glamorgan University, although the environmental management system was created from the initial interest of the Directorate, this was not followed-up with full implementation and practice. During the research period at Cardiff University, whilst the leadership were beginning to take environmental management more seriously, this was not being publicised as a change management event. The outcome of this situation was that the initial view of the researcher that environmental management as being a change management event made an impact on the interviewee sample and choice of interview questions.

At the start of this research the researcher held the view that because each case study university had an Environmental Policy, that there would be systems and procedures in place to carry out the policies. Consequently, the interviews undertaken concentrated on environmental management aspects which were of paramount importance to the researcher. In fact, the policies and environmental management system already in place at Glamorgan were not being enforced; systems and procedures were not in place to carry out the policies at the other universities and university members were not being impacted on to carry out environmental management initiatives as initially expected. The choice of interviewee sample related to the individual perspective, as the researcher sought to converse with individual members in order to explore the impact on them from environmental management initiatives. The decision was taken at the outset not to include senior management and university leaders for their 'official' version of events.

The researcher proposes that this study be replicated within other universities in the UK to provide valuable data on the progress of environmental management within universities. The contribution to future research within universities could be extended through the inclusion of a greater number of case study universities to enhance the across case and within case analysis of individual sensemaking of environmental management. Future research could be further enhanced by including senior management and university leaders in the interviewee sample, so as to compare and contrast leadership and university members' views which would enable the researcher to gain the whole story and a fuller version of events. This research suggests that resistance to implementing environmental management initiatives in the form of organisational cynicism and ambivalence by university members, and

importantly, ambivalence on the part of university leaders. However, little research has been carried out on the impact of leadership resistance to change to date. There is, therefore, a need for future research to explore leaders as resistors and the negative effects on organisations from this behaviour. Interviews carried out with university leaders would explore their ambivalence to environmental management; the data would validate the existence of ambivalence and would provide understanding for its existence. Data gathered from university leaders would assist the leadership themselves to acknowledge their behaviours and their subsequent negative impacts on managing change events.

In this research the interview questions were framed around aspects of environmental management to leverage my interpretation of the research participants' sensemaking practices. Future research could develop a theoretically informed approach to interviewing for individuals to open-up their uncertainties regarding their situation, so that the data would reveal the processes of creating meaning. However, due to the non-existence of enforced environmental management at the time of this research, it is unclear as to how individuals would retrospectively make sense of the situation. Future research undertaken at these case study universities may reveal individual retrospective sensemaking of the implementation process.

The fact that change within universities is a slow process means that this research would also benefit from a longitudinal study to discover what is happening in the case study universities over time. The process to implement environmental management in these universities had been ongoing for several years (and for some universities longer than others) before the start of this research. There are obvious

benefits to talking to university members about environmental management issues over a prolonged period of time; people may become more confident in their responses to the interviewer or may become more self aware of their individual identity within their university. A longitudinal approach would, therefore, enhance the retrospective sensemaking of individuals. The researcher feels that the data would be improved through a longitudinal study to discover how individuals made sense of the change process over time.

The implementation of environmental management has a long road to travel as is aptly summarised by Susan:

“...it’s a slow process which can be frustratingly slow at times, but it’s really a case of trying to change people’s attitudes” (Susan, middle manager, Cardiff University).

It is with this hope that this thesis closes.

APPENDIX A

Interview questions:

1. Can you briefly describe your role in the university?

Job description, brief duties, how person fits into School / Dept

2. Are you aware of any environmental initiatives in the university?

Is there anything at all you know of eg. recycling?

3. Can you recall how the environmental measures got started?

Who instigated the environmental initiative / EMS?

Was this a top-down or bottom-up process?

Do you feel there is a clear vision from management?

Do you feel that the EMS is followed through 'command & control' or are people enrolled into the initiative?

4. How are the environmental initiatives communicated to you for implementation?

Are the environmental initiatives / policies communicated to staff, academics, stakeholders effectively?

Do you feel 'engaged' in the process or is there 'command & control' from management?

5. Have systems & procedures changed to take into account the environmental measures? Have new procedures been issued to implement the environmental policy?

Would you say the environmental policy affects what happens in the university – by the way things are done?

6. Has your job or routine changed at all since the environmental initiatives have been implemented?

How would you say the initiatives affect your daily routine?

Do people comply with new procedures or are they ignored?

Would you say there is compliance or resistance to the environmental measures?

7. Can you explain what the Environmental measures / Policy mean to you on a personal basis?

How aware are you of environmental initiatives and procedures in detail? Do you feel engaged with the measures or not?

8. Do you feel you have been affected in a positive or negative way by the implementation of environmental initiatives?

Do you feel that the procedures are necessary or unnecessary?

Is it a waste of your time? Do you feel engaged in the process?

9. Have you noticed any benefits or impacts on the general university campus environment from the environmental measures?

Do you think the measures are making a difference? I.e. to the campus, environment as a whole?

Could more be done by the university?

10. Do you personally support the environmental initiatives?

Do you agree with what the university is trying to achieve?

Do you feel this is a good use of resources (time, money) or not?

11. What would you say was the main reason or driving force for the environmental measures or for having a Policy?

Do you know of any reasons why the university would have to instigate an environmental Policy / initiatives? Who was mainly involved in the process?

12. Overall, would you say that the university encourages new initiatives, either environmental or anything you know of?

Would you say is it a learning organisation?

Is there a culture of encouraging new ideas / ways of working?

13. Do you feel that there is a university strategy with regards to the environment?

Is there a clear environmental vision from management?

Has the university gained a better image or profile through the environmental measures? If so, was this a deliberate strategy?

14. Do you feel that there been any problems in the implementing the environmental initiatives?

Eg cost barriers, time allocated, lack of clear vision, lack of management leadership?

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